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The Madras University

Section A. Humanities

Centenary Number

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DOCTRINA VIM PROMOVET INSITAM

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Journal of the Madras University

Section A. Humanities

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FOREWORD

by

SIR A. LAKSHMANASWAMI MUDALIAR
M.D., LL.D., D.SC., D.C.L. (OXON), F.R.C.O.G., F.A.C.S.
Vice-Chancellor, University of Madras

I am glad that a Special Centenary Number of the Madras University Journal dealing with Humanities is being published under the Editorship of Dr. T. M. P. Mahadevan, Professor of Philosophy in the University.

It is a matter for gratification that several eminent persons are contributing articles to this issue, and I am sure that it will receive the attention that it richly deserves. There are some articles of very great interest—particularly the article by Vera Anstey on the "Reflections on the Philosophy and Method of the Second Five-Year Plan" is of interest. Dr. C. P. Ramaswami Iyer speaks of New China with personal knowledge after his recent tour. I am glad that the revered doyen of Indian Philosophical world, Sri P. N. Srinivasachari, has contributed an article which must attract attention. In a journal which is rich with contributions from erudite scholars it is difficult to pick out any one and speak about it. I am sure that the Journal will be widely read, and I congratulate the authors on bringing out this issue.

University Buildings
Madras
8th January, 1957.

A. L. MUDALIAR
Vice-Chancellor

OURSELVES AND THE CENTENARY

We join in the celebration of a historic event in the history of our University — the completion of its first century — by bringing together between the covers of this volume the thoughts of many a great mind, both from the east and the west, and by recording the growth of the Research Departments of the Humanities Section of the University.

Although we usually publish in this Journal only the research contributions of the members of our departments and the endowment lectures, we thought that the occasion of our University's Centenary should be availed of for inviting learned contributions from eminent scholars, of east and west, representing all the disciplines of the Humanities. The response from the invitees was both prompt and cordial. We have great pleasure in presenting their papers in Part One, along with the contributions from our own ranks.

In Part Two, the history of the several research departments which are covered by this publication is given. It will be found that the contribution these departments have made to the stimulation and progress of research is not inconsiderable, and that the work of these departments constitutes an important aspect of the functions of a University.

We are grateful to our great and distinguished Vice-Chancellor, Sir A. Lakshmanaswami Mudaliar, for the kind Foreword he has written, blessing this Special Number. We

are indebted to all our contributors for their generous offering which has enabled us to weave this *Garland of Letters* for the adornment of our *Alma Mater* on the auspicious occasion of the Centenary. To the Members of the Editorial Board, to the Fraternity of University Teachers, and to the Registrar and the Office Staff we are thankful for their unstinted co-operation. The G. S. Press deserves our word of praise for their expeditious and neat printing of this Special Number.

T. M. P. MAHADEVAN
Editor

Succession List of Editors

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1951 —	Dr. T. M. P. Mahadevan.

Note:

1. The University started the Annals of Oriental Research Institute, in April 1937. Since then, the publication of the Indian languages number was discontinued.
2. The Science Section has been appearing as a separate issue, entitled Section B, from July 1943.

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PART ONE

CONTRIBUTED ARTICLES

I

REFLECTIONS ON PHILOSOPHY AND METHOD OF THE SECOND FIVE-YEAR PLAN

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It is widely held that the next five (or some say ten) years will show, once and for all, whether or not it is possible, under a democratic regime, to break the vicious circle which has hitherto condemned the Indian masses to hopeless poverty. Hence it is highly desirable that the Second Five-Year Plan should be subjected to the closest scrutiny. The Indian planners have wisely sought advice from varied quarters, have presented draft and revised plans, and in general have provided for great publicity—as indeed they did for the First Plan also. It cannot be denied that the method of presentation has been truly democratic.

Nevertheless the results of the First Plan—despite the Plan's undeniable and encouraging success as a whole—contain certain disquieting features, as do also the objectives and policies of the Second Plan. These suggest the need for still further consideration of its bases and methodology.

As was only to be expected, a plethora of discussions, criticisms, comments and suggestions have followed from each stage of the emergence of the Second Plan. These have given vent to the widest divergence of views on almost every aspect. It is, therefore, with some temerity that I add yet one more comment: one that is admittedly a very incomplete appraisal, and concerned only with very general matters. Assuming a knowledge of the main features, facts and figures of the Plan, I wish to consider some of its "critical points", what criteria can be used in studying it, and how far it is possible to judge the value of its general structure—rather than to analyse particular aspects or quantitative assumptions and estimates from a technical point of view.

The following comments will be grouped by reference to six inter-related and often over-lapping aspects: (i) the nature of the bases of the Plan's assumptions and estimates—especially those expressed in quantitative terms; (ii) the Plan's Social Philosophy; (iii) its economic foundations; (iv) its logic; (v) its realism; (vi) its use of the lessons of experience.

(i) In the first place it seems to me essential to realize that the Plan is not, and cannot be, a technical exercise capable of expression in correct projections and quantitative terms. The Plan —like Society itself—is basically an organism, not a mechanism, and when all is said and done it remains true that a large part of its underlying assumptions and structure must necessarily be based on trial and error. This is not only because of the lack of accurate relevant data (however important this may be) but because the trend of developments and the results of the policies adopted depend not only upon measurable (even if unknown) data, but also upon immeasurable data—such as the influence of personalities, psychological reactions, the strength of custom, tradition and widespread beliefs and preconceptions. In addition, of course, there is the fact that India does not form an isolated or closed economy, but is closely dependent upon external events and relationships.

The need for more and more accurate economic data relevant to India and to conditions in underdeveloped countries in general is universally recognised. Criticisms of the Plan have been directed, with reference to the quantitative bases of its assumptions and estimates (for instance as to the rate of population growth, the capital-output ratio, the estimated increase of real per capita income during the Plan period, and the estimated increase in the ratio of saving to national income) less to the attitude of the planners, than to the actual figures chosen and presented. My point is that these latter must inevitably be largely a matter of judgement, and not of the "discovery" of correct figures, and also that the Plan itself—and external events—may, and in most cases will, react upon and change these rates and ratios to an, at present, unknowable extent. "Informed guesses" must be made, if there is to be a plan at all, but it is important to realize that even substantial deviations in the Plan's estimates from figures which would accurately fit the situation to-day, might be completely swamped by changes induced by events which have not yet occurred and

hence cannot be foreseen. For instance the discovery of a simpler and cheaper contraceptive might lead to a quicker and greater reduction in the birth-rate than to-day seems within the bounds of possibility. On the other hand, just as Ceylon's death-rate halved in a couple of years owing to the practical elimination of malaria (and its incidental results), so might India's death-rate be drastically reduced by some comparable means, without any substantial change in the birth-rate. The planners adopt the realistic attitude that under existing circumstances a reduction in the rate of population growth would facilitate implementation of the Plan (and hence that increased funds should be devoted to Family Planning) but anticipate no great change in either direction.

The figure adopted for the capital-output ratio in the First Plan was clearly a mere guess (based on Western experience) and proved wide of the mark (i.e., unnecessarily high), although the ratio said to have been actually realized has shaky foundations. Hence a more optimistic figure (2·3 : 1, instead of 3 : 1 as assumed for the First Plan) has been adopted in the Second Plan's calculations. This has been criticised as over-optimistic on the grounds that the Second Plan lays greater emphasis on investment in capital-intensive projects, and it tends to be suggested that the capital-output ratio can be used as a criterion for both determining investment projects and the choice of techniques (in particular as between small-scale and capitalistic production).[1] Without reproducing Mr. Ghosh's and Mrs. Robinson's arguments, it can simply be said that although it is necessary to take a figure to represent the capital-output ratio when estimating the extra income expected to result from planned investment, there is no sure way of deciding what it should be, whilst the ratio cannot, by itself, act as a guide to either investment priorities or choice of technique. Too many imponderables are involved; it all depends on the particular circumstances. There is no short-cut to planning of this type—no magic figures which, if discovered, will open Aladdin's cave. There is no reason to suppose that the planners are not fully aware of these facts, and it can be suggested that while a large proportion of the projects in the Public Sector are capital-intensive, many in

1. See Arun Ghosh: "Capital-Output Ratio—Its Uses and Abuses", and Joan Robinson: "The Choice of Technique": (Economic Weekly, June 23, 1956; pp. 707 and 715).

the Private Sector and those relating, for instance, to small-scale industries and community projects, are labour-intensive. These latter, if successful, might conceivably attain results, cumulative in character, justifying the planners' optimism with regard to the generation of additional output and income. Far more important, and more difficult, than the choice of a figure for the capital-output ratio, are the decisions as to priorities and choice of techniques. These it is impossible to discuss here, except to question the wisdom of the policy to restrict or tax private large-scale industry for the benefit of small-scale industry. It is one thing to invest public funds in reorganising and providing experts and services which may render some small-scale industries competitive, but quite another to discourage and penalise enterprise, which in India is a very scarce commodity. It may also be suggested that the Plan's schemes for encouraging small-scale industries with the primary object of preventing technological unemployment and providing additional employment, savour of lack of discrimination. It is, in particular, disappointing to find such scant reference to the need to organise ancillary processes amongst cottage and other small-scale workers pari passu with the establishment and expansion of large-scale industries. Small-scale ancillary industries should, on the Japanese model, prove fully competitive.

The planners' estimate of the rising ratio of saving to national income is open to graver criticism. "Wishful thinking" appears to have usurped the place of any reasoned estimate and gives rise to great misgivings. In face of the strong propensity to consume of the poverty-striken masses, and the increasing restrictions upon and burden of taxation on the better-to-do, this target is unlikely to be achieved in the absence of some definite policy compelling or inducing savings, or—better—combining forced savings with inducement.[2]

It can be concluded under the first heading that in many cases the quantitative bases of the Plan are matters of judgement rather

2. For instance where additional land (or irrigation water) is made available for cultivation settlers might be required to deliver to the Government a given share of their crops without immediate payment (of course in addition to any betterment tax) in return for the promise of better or a replacement of implements, more cattle or other domestic animals, or more land at a later date.

than of calculation (although, of course, detailed calculations can help to guide judgement). There are bound to be large margins of error so that trial and error must play a large part. Hence, possibly, the greatest merit of the Second Plan is its elasticity. It is explicitly recognised that substantial adjustments may prove necessary, and the Plan provides for continuous review and revision. Successive plans, embracing long-term projections, are envisaged, whilst it is intended to break-down the five year period into annual plans. More frequent and up-to-date reports are to be required from States and Departments. This, surely, is a wise procedure.

(ii) The Plan's Social Philosophy is most clearly shown in its objectives (as well as in the procedure for publicity mentioned above). Its long-term objectives may be summarised as the maintenance and development of democratic government, and the intention to establish a Welfare State which shall gradually evolve into a Socialist Pattern of Society. The four immediate objectives are a sizeable increase in the national income, rapid industrialization,[3] expanded employment opportunities and a reduction of inequalities in income, wealth and economic power.[4]

Given the democratic ideal, the long-term, underlying economic objectives can only be judged by the extent to which they accord with the wishes of the nation (so far as this can be ascertained). Both these and the immediate objectives appear to meet with very wide acceptance—despite the grumbles of certain sections of society at some of the policies involved, and at the rate at which socialisation is being pursued. But it is obvious that measures taken to promote some of the immediate objectives, can be highly inconsistent with the promotion of the other objectives. In the absence of "consistency" it may be asked whether some attempt at reconciliation or "weightage" should not have been made in the Plan as between these various objectives. It is true that an increase in national income is put first on the list, followed by the planners' principal means of attaining that increase, and that in fact the Plan does give an inferior status to its employment and equalisation policies. Nevertheless this

3. Industrialization, unlike the other objectives, is essentially a means, rather than an end, and should be judged as such.

4. The Second Five-Year Plan, 1956, p. 24.

problem is hardly squarely faced. Superficially, at least, the promotion of employment appears to have low priority—the Plan's policy being designed to do little, if any, more than provide jobs for the new entrants to employment (arising from the growth of population) and prevent an increase in the existing body of un- and under-employed. On the other hand some of the policies intended to lead to the equalisation of incomes, wealth and economic power run directly counter to the acknowledged need to encourage enterprise and expansion in the private sector—even though the proposal to impose a "ceiling" on incomes (supported by the Taxation Enquiry Commission) has so far been rejected. Here there appears to be a clear inconsistency in the Plan's proposals.

It would certainly be difficult, for political reasons, formally to defer or give low priority to the objective of economic equalisation. Nevertheless so long as India's paramount—and not easily attainable—need is a sizeable increase in national income, and as it is expected that private enterprise should play an important and enthusiastic part in securing this end, it is surely necessary that means taken to reduce inequalities should so far as possible avoid drastic direct dis-incentives to private enterprise and effort. Could not this be achieved, at this stage, by concentrating more upon policies designed, on the one hand, to protect and raise the position of the lowest income-groups (by, for instance, higher employment targets, minimum wages, and extended welfare provision), and, on the other hand, to tax wealth, property, luxury-goods, and conventional necessities, rather than to increase taxes on income and profits (on which the rates of taxation are already comparable with those in advanced countries which have a long experience of progressive taxation) with inevitable dis-incentive effects? In addition it is to be feared that the very rapid increase in the burden of dis-incentive taxation, especially in the face of special administrative difficulties and inexperience, will stimulate avoidance and evasion to a serious extent, and thus engender contempt for the law. Moreover it should not be forgotten that the dis-incentive effect of such taxation will be even greater on foreign entrepreneurs, who apart from anything else, are not in a position to practise avoidance and evasion to the same extent as Indian businessmen.

(iii) It has been alleged that the economic foundations of the Plan have been uncritically based on out-moded theories, or on

theories appropriate to advanced but not to under-developed countries, and hence that a completely new outlook in this respect is necessary. Personally I can see no evidence of this in the Plan. Modern economic theory fully recognises that policies (specifically employment policies) found efficacious in the West can only be applied successfully elsewhere provided the assumptions upon which they are based are fulfilled in the latter cases. It is of course true that no theory of development leading to procedures and policies appropriate under all circumstances has yet been adumbrated. It is, however, impossible to conceive of any such theory, much as it is to be hoped that researches will eventually throw much more light on the whole problem of economic growth. For it must never be forgotten that under-developed countries frequently differ from each other in the most fundamental respects. For instance, they may be either over-populated or under-populated, with consequential effects on the nature of their problems.

The fact remains that the need for further knowledge as to the best means of promoting employment in a country like India is urgent. The First Plan ended—despite its general success—with a more serious un- and under-employment problem than when it started, and the very meagre employment target of the Second Plan is, perhaps, its most disappointing feature. The explanation seems to be the serious disproportion that exists, and which the early stages of modernization and development only tend to accentuate, between the demand for and supply of different grades and qualities of labour—the more rapid the economic changes in India are, the greater this discrepancy is likely to become, unless the employment needs of development can be in some way anticipated and provided for. Great efforts have already been made to provide training of every type, at home and abroad, for modern occupational needs, but so far supply has continued to lag behind demand, whilst openings for the unskilled masses and inappropriately educated[5] continue to shrink—and must be expected to continue to shrink. It seems highly unlikely that small-scale industries can be reorganised or expanded in a

5. It has been said that it has been "widely accepted that education in India fails to perform any function other than imparting information": A. C. Chhatrapeti: "Men for the Second Plan"; Economic Weekly, June 23, 1956, p. 731.

manner that will do more than prevent any increase in technological unemployment, except in so far as ancillary processes are concerned (and their limits are technically restricted). The only cure appears to be long-term: (a) by checking the rate of population growth: and (b) by training Indians to train Indians. In the meantime certain palliative measures might be adopted, such as those suggested by Mr. V. K. R. V. Rao.[6]

(iv) The presence or absence of logic in the Plan is most clearly revealed by the test of self-consistency in its various parts. The inconsistency in some of the policies designed to attain the Plan's four main immediate objectives has already been mentioned, and although this is a test that should be continuously applied, space forbids any further discussion here.

(v) The realism of the Plan—so essential if it is to gain widespread confidence and enthusiasm—has been questioned, with special reference to the large gap in the resources necessary if the proposed expenditure is to be carried out. This raises the whole question of the methodology adopted to frame the two sides of the Plan's main equation.

In this connotation the charge appears unjustified. If there is to be an equation, it must equate. (Or is this a case where some items can be more equal than others?!) Whether the planners actually started with expenditure and then (as sometimes alleged) made the resources fit, or the other way round, is irrelevant. The only possible method was gradually to bring the two sides together by adjustments and reorganisation, until by some means or other—in this case, the "gap"—a balance sheet emerged. The resources "gap" could have been eliminated by reducing expenditure, but if then the conclusions followed that (for instance) the employment situation would have seriously deteriorated by 1961, whilst per capita income would have failed to rise, how could enthusiasm and all-out effort possibly be engendered?

The process seems to have been to stop reducing expenditure at a point at which the sights seemed worth while, and then to rely upon enthusiasm, hard work, luck, (such as good monsoons,

6. "The Second Five-Year Plan: Employment Pattern and Policies" (p. 235, "Papers relating to the Formulation of the Second Five-Year Plan"; Panel of Economists, Government of India, Planning Commission, 1955).

favourable trends in foreign aid or in the terms of trade, or unexpectedly enthusiastic support for the community projects) and —as a last resort—inflation (that should be sufficient, but not runaway) to fill the gap.

This seems to me defensible. No one can fight stoutly for an unworthy cause. Wonders can be worked if the right spirit can be evoked. The First Plan more than fulfilled a number of its targets, so why should not the Second Plan do likewise?

(vi) The experience of other countries has been widely used by the planners, where it seemed appropriate, and reference has already been made to some of the experiences of the First Plan. Let us, in conclusion, summarise some of the latter.

To put it in a nutshell, the First Five-Year plan, in spite of a slow start, attained its main broad objectives and targets, surpassed some particular individual targets (such as for cereals and cotton output), but failed to achieve some other particular targets (e.g., that for iron and steel output), and failed to attain the total planned expenditure and left the employment situation slightly worsened. The private sector failed to play its full anticipated part during the First Plan, but inflation was brought under control,[7] as also the Budgetary and balance of payments positions.[8] The principal causes of the satisfactory progress made were the energy and enthusiasm with which the Plan was carried out, the series of good monsoons from 1952 on, and perhaps the fact that the targets set had been modest, much of the work done being acknowledged to be preparatory. The chief weaknesses revealed were the difficulty of carrying out to time certain parts of the planned expenditure, failure to find a solution for the employment problem, and the failure to stimulate sufficiently domestic savings and the private sector.

In the light of this experience, it is impossible to deny that the Second Plan has a hard task to perform. The course of the monsoon during the coming seasons remains of great importance;

7. Prices have begun to rise again, since the start of the Second Plan, and an inflationary trend is now (Sep. '56) anticipated.

8. See Five Year Plan, Progress Report for April-Sep. 1954; Second Five Year Plan, The Frame-work, p. 11; and Chaps. I and XIX of the "Second Five Year Plan", 1956. (Government of India, Planning Commission.)

the employment and savings problems have not been solved; private (domestic and foreign) enterprise is being more heavily burdened; the sights have been set higher and there are already signs of inflation. On the other hand energy and enthusiasm remain unimpaired, whilst in many sectors preparatory work carried out during the first five years has begun to bear fruit (notably with regard to multi-purpose and community projects). In addition experience is being gained in the administrative and other spheres.

This brief survey has clearly omitted reference to many important and controversial aspects of the Second Plan. I have concentrated upon stressing what may perhaps be called a particular method of appraisal, illustrated by selected examples. My hope, in so doing, is to stimulate further consideration of at least some of the difficult problems facing the planners.

EARLY GRAECO-ROMAN INFLUENCES ON SOUTH INDIAN LIFE AND LETTERS

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Reader in Indian History and Archaeology,
University of Madras.

I. *Introduction*

It strikes one as a curious historical coincidence that the first serious awakening of knowledge leading to a classical age began in Greece and South India almost at the same time. The age of Agastiyar, the author of the first grammar in Tamil, is generally placed in the VI century B.C. and Tolkappiyar, whose grammar is still extant, is generally considered his devout pupil.[1]

In Greece this was exactly the period of her great dramatists and playwrights, Aeschylus, Sophocles and Euripides, her historians, Herodotus, Thucydides and Xenophon and her philosophers, Socrates, Plato and Aristotle though the last belongs to the IV century B.C. This was again the period of the rising art of the Greeks, which reaches its highest water-mark in the period following the Persian wars, the well-known age of Pericles. This wonderful era of the flowering of culture in distant Greece in the V century B.C. clearly posits a deep current of human intercourse and comparison of values, the history of which is unfortunately in the dark. Some inkling to it seems to be offered by the history of the ancient Tamils, whose literary works throw light on their connections with the Greeks and the Romans in early times. The well developed culture of Tamils so far back as the age of *Tolkappiyam* in the V century B.C. has to be also explained in its own turn with reference to our accumulated knowledge of the classical history of the West. If this century in Tamil history excels in the science of grammar, as the Greeks excelled during the period in poetry and dramatic poetry, what happened in Rome in a later period is analogous to the second era of Tamil literature, the first three centuries of the Christian era, now generally known as the

1. This relationship has been controverted by historians, but all this controversy does not touch the antiquity of *Tolkappiyam*.

Sangam age. Roman poets like Virgil, Horace and Ovid (Ovid died in 17 A.D.) are only a little anterior to our Tamil poets Kapilar and Paranar and the whole host of them. Though the mode of poetry in the two countries varied it will be noted that a certain analogy does exist between the works. For one thing the fact that two countries so far separated as Italy and South India both by distance and racial differences (though to some the Dravidians also are a Mediterranean race) must first begin the art of poetry and attain a mastery not still surpassed is a fact to be explained. On the other hand, the Tamil literature of the period is only too full of references to the ancient Roman connections with South India and the plethora of the Roman coins of this period dug up in various places in South India only goes to further augment the reality of these connections. Mr. R. Sewell who has made a careful study of these coin finds posits a close trading connection between the two countries in the first three centuries of our era.[2] We have evidences of Indian embassies sent to Caesar Augustus during the period which he is said to have received, according to Roman records, at Terragona (in Spain) in one case and the island of Cyprus in another.[3]

The Tamil-Roman connection seems to have lasted throughout the period of the age of poetry in South India which may be therefore very fittingly described as the Augustan age of Tamil literature. This was the period of the Sangam as it is generally understood in South India.

II. *East meets West*

The comparison between the east and the west does not stop here.[4] Records were first made in Greece and Rome on scrolls written upon with the stylus until this yielded place in Rome to the tablets strung together by a loop. In India the palm leaf equally strung together by a loop served the purpose. In earlier times, however, what all one should know seems to have resided in the minds of teachers who passed it on to generations mainly through memory. Accordingly, one is struck with

2. *JRAS.*, 1904, 591.

3. See S. K. Iyengar, *Contributions,* 329.

4. Prof. V. R. R. Dikshitar assigns a Greek origin to the ear-boring custom of the Indian (See his *Pre-History,* 103) and Mr. G. R. Kaye states that the Hindu names of week-days are the exact equivalents of the Roman names (Memoir No. 18 of the Archaeological Report, 1936).

the importance that comes to be attached to memory quite early in man's history, since both in Greece and Rome boys at school were given training in memorising proverbs and set passages, a phenomenon which we see to this day in our Indian schools. If of the Greeks it was said that not a few Athenians could recite the entire Iliad and Odyssey, the same might be said with equal truth with regard to Indians with reference to their ancient Vedas and epics. In South India, as we shall mention later, all the Sangam poems were written down after having been committed to memory and passed on in that fashion from generation to generation for many generations on end.

In general Greek education consisted of three main branches—gymnastics, music and grammar and the Greeks ended their gymnastic exercises with an oil bath in which oil was smeared all over the body before entering the stream of water which was always close by the gymnasium. In music the Greeks learned to use the lyre with seven strings, an instrument analogous to the *yal* of the Sangam times. The occupation of the Athenian manhood as that of the Roman was mainly in fitting oneself out for war. Daily sports were conducted in public places in which one's metal was tested. The picture of the Roman gladiator is one that will never be effaced from human memory. He was trained in special schools for engaging in single combats and at stated occasions gladiatorial combats and chariot races were given as free entertainment to rejoice the people.

Animal-baiting and playing at dice were common pastimes of the day. Dramatic performances pantomime and vaudeville besides symposiums of professional performers and jugglers besides troubadours were also common in ancient Rome, while it was in Greece that the dramatic art first made its debut in the V century B.C.

Religious festivals seem to have, however, offered the chief occasion for popular amusements both in Greece and Rome. Such were the festivals of the great Panathenae and of god Dionysus in Greece and of Saturnalia and of the Harvest god in Rome, when, as an ancient writer tells us, people seemed to go mad with joy. A bas-relief kept in Louvre, Paris depicts the famous Roman feast Saturnalia in which the bull, ram and boar are clearly carved. They were the animals sacrificed to the gods on this occasion to secure purity from sin.

Greek and Roman art excelled in a large measure during the period 400 B.C.—200 A.D. It was during this time that the use of the column and the arch were discovered and we have definite evidence that brick was used as early as the V century B.C. in building work and painting was also resorted to. The Greeks often used colour to relieve the monotony of the walls. Painting of figures was also not unknown. As early as the period of the Etruscans in Rome round 900 B.C. painting of figures on walls was known. Even tombs of dead men were painted with figures of men, flowers and birds as is seen on the Tarquinii tomb in Etruria. The Greeks cultivated mural and easel painting quite early and by the IV century B.C. it became justly famous and went to influence the later Roman painting as well. Ancient tombs in Greece still reveal painted vases of no mean order, vases of red glazed material with figures in black. The Roman paintings mostly depict mythological scenes in richer and improved colouring which is mostly red. The Romans were famous also for mosaic paintings of walls and floors in geometrical designs bearing figures of domestic animals like dogs as is seen in the ruins of Pompeii.

In general the ancient Greeks and Romans were worshippers of nature in its various forms and had deified every faculty of man into a god. Thus the Greek goddess Athena was the symbol and goddess of wisdom and Aphrodite was the goddess of love; while in Rome Mars was the god of war. In the same way the Greek god Dionysus and the goddess Demeter (mother Earth) were the deities of agriculture; while Hermes was the god of trade and commerce.

The association of the Greek gods and goddesses led by the god Zeus of the Olympian heights of Thessaly is a significant factor showing the part played by mountains in early times in the evolution and history of divinity. Both the Greeks and the Romans conceived their deities as "really magnified men and women subject to all human passions and appetites but possessed of more than human power and endowed with immortality." Even the great Homer said: "Verily the blessed gods love not forward deeds, but they reverence justice and the righteous acts of men."[5]

Two facts in ancient Roman religion strike us as unique. One is the inordinate reverence it paid to ancestors whom they fondly

5. Quoted by Webster in his *Ancient Civilisation*, 123.

described as the manes, meaning good people. They offered frequent sacrifices to propitiate their departed spirit and always considered them as among the household even in their spiritual state. Students of Roman history would remember the ancient Roman festival called Lemuria which was celebrated wholly in honour of the manes.[6] The second astonishing circumstance is the importance the Romans attached to omens as indication of divine will. A sudden flash of lightning, an eclipse of the sun or the appearance of a comet was enough to determine their course of action and certainly no great undertaking was launched out when the auspices were bad.

When the picture drawn by the Tamil poets of the first three centuries of the Christian era is spread out before us one cannot escape seeing the striking similarity between what we learn of the Greek and Roman conditions and what seems to have actually obtained in South India during the period. Whether it is a question of the religious life that is portrayed or of sports, games and amusements or of war or music and general social life the two pictures presented by the East and the West agree to a large extent.

It is this that brings out the nature of the Sangam age vividly to the forefront justifying to the finest point the term used to describe it, "the classical age of the Tamils". Thus if we take for example the description of religion the Sangam poems bring before our mind gods like Muruga, a Tamil war deity residing on the hills, Mayon, the god of pasture and animal husbandry, Balaraman, the god of agriculture and Varuna, the god of rain and goddesses like Kalaimagal, the goddess of learning and wisdom. Even the worship of nature is not jettisoned in this picture where the moon and the sun and the rain are adored and praised verily like gods and goddesses. Respect for omens is equally well seen in these ancient poems. Bad dreams, the falling of comets, indications seen in the direction of bird flights are clearly mentioned as omens in authentic Sangam works like the *Puram.* Again animal and even human sacrifices to propitiate the gods are often referred to in these poems and numerous festivals in their honour like the Indra, Muruga and Kamavel festivals are mentioned in these works.

6. One wonders whether the name 'Lemuria' given to the submerged part of South India was given by the Romans or at least Roman in origin.

The picture of society seen in these Tamil poems bears equally well a comparison with what is known to us of the West of those times. Music and dancing occupy a really large place in South Indian poesy and in fact the South Indian of these early days was far superior to his Western counterpart. The very number of *ragas* and dances described with all the punctiliousness of a connoisseur by the poets of the Sangam times is astounding to the modern reader, though in the art of the drama alone the Greeks would appear to have reached a position perhaps superior to the Tamils. In South India of this period we hear largely only about the *kuthu* (which might have been a dance-drama) though many varieties of it are described in the poems of the day. What was the excellence reached by the Tamil drama vis-a-vis the Western drama of the times it is not easy to compute. Still it would appear that the *kuthu* of the Tamils was more in the nature of the troubadour's art than anything else. But the troubadours themselves appear to have reached a greater excellence than what was attained by the Roman minstrels of the time, if we judge from the prominence given in the Sangam poems to the *panar* or wandering minstrel and even more from the large royal patronage commanded by these men.

Tamil life in early times was steeped in joy. The pastimes of chariot-riding, boxing, and animal-baiting were quite common while some kind of chess game and ball-throwing were enjoyed by the women-folk. The *Pattinappallai,* a single work of 300 lines, is enough to convince us of this truth. That the Tamils had lofty palaces and large living houses during this period is equally borne out by this very poem, though it is possible that they were not built so strongly as the ancient buildings of the West some of which have still survived the hand of time. However, painting that became the fashion in the West only round 400 BC is depicted to have reached a high state of perfection atleast a hundred years earlier in South India, as may be seen from references in *Tolkappiyam* to life-like paintings. The reference to manes or ancestors seen in the Roman life of early times is depicted equally clearly in *Tirukural,* in which reference is made to the *thenpulathar* or the departed.

III

PROCESS OF ECONOMIC GROWTH

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The process of economic growth is conditioned by several motivating and inhibiting factors. The triumph of either of them over the other will determine the course of economic evolution. A prediction of the probable pattern of growth would depend upon a proper assessment of the strength or weakness of these factors. They vary in their intensity according to the level of economic development in each country, the attitude of its people and the traditions governing them. The purpose of this paper is to appraise the influence of these factors in the special context of the under-developed areas.

I

Among the proximate causes of economic growth the most fundamental is the willingness to put forth adequate effort for the exploitation of economic opportunities. But societies differ in this respect owing to the difference in their valuation of material goods relatively to effort and in relation to the opportunities available among them. Since effort is also conditioned by the environment in which a people live, it depends upon the extent to which the social and economic institutions of a country encourage it. The desire for consumers' goods, which is the motivating factor of effort, is not equally potent among all people. There may be a lesser appreciation of material goods among some, either on account of their ascetic outlook or because of their limited mental horizons due to habits, taboos, ignorance, etc. In other words, people may work less because they may not know what to do with the extra money acquired. It is also not unlikely that people may place higher values on leisure and good relations with others than on an aggressive search of wealth. Greater effort may be forthcoming with a favourable attitude towards work; when it is considered as a virtue as prescribed in the teachings of some of the religions,

Effort also presupposes an element of adventure consisting of a readiness to take risks and fight in open competition. But this depends upon the temperament of a people and their traditions. In fine, resource by itself cannot lead to growth unless there is adequate response from the people constituting a society. Among under-developed economies these are by no means a drag on economic effort at present, because there is a recognition among them, of wealth as a means to power and as a mark of superior status. But the incentive to effort may be neutralized to some extent by the superiority of their ideological approaches to life relatively to purely mundane considerations. The economic calculus may be deliberately ignored when non-economic values are held in higher esteem.

Effort in its objective aspect depends on the encouragement offered by the existing institutions. The institution of private property would accord protection to effort and assure the fruits of it. Individual reward as an incentive to work is an essential pre-requisite of effort; as much reliance cannot be placed either on the pleasures of creative effort or on the power of communalism to serve one's fellow men. The Law of Property is meant not only for protecting private property from public abuse but also for protecting public property from private abuse. So maintenance of law and order is essential for economic growth. Public confidence in it should not be shaken by a too frequent interference in property rights by constant changes in taxation. A determination of the proper share of reward to each recipient bristles with difficulties. It is subjective, depending on what each one has been brought up to believe. However, it should be adequate to foster incentive to work. The converse of it is obedience to authority; as without discipline no orderly work is conceivable.

Economic growth warrants specialization which in its turn requires coordination through a price mechanism in a capitalistic structure. But such an arrangement would be effective only to the extent to which individuals respond to changes in prices. This response however is a matter of habit and if poor, will be a limiting factor in the success of the entire organization. It is also a matter for consideration whether the economic organization should be based on individual freedom or on collective action. Individual freedom may encounter institutional obstacles, but it is questionable whether it ought to be fostered at any cost, because very often,

without collective action much cannot be achieved. A backward society may grow more rapidly through planning; but when the art of public administration is not properly learnt, *laissez-faire* is better for economic growth.

Economic growth is also associated with vertical social mobility. The upper classes should be continuously refreshed from below, as otherwise the society would degenerate biologically and culturally. There should be opportunity for cultural fertilization. If positions of responsibility are open only to the members of a few families, economic growth cannot be maintained. If the social institutions in a country prevent such vertical mobility, there can be no economic growth in it. Similarly, if there are institutional restrictions on the access to resources, growth may be impeded. Access to the ownership or the use of land may be prevented by the existing widespread ownership of it. Labour may not be available when they are tied to particular occupations by institutions like Slavery, Serfdom, Caste, Racial prejudice, etc. An access to the consumer may be interrupted by the various types of monopolistic arrangements. They are harmful to economic growth by the resistance that they offer to innovation.

II

Religion can influence economic growth to the extent to which its attitude is compatible or incompatible with growth. It is also not unlikely that incompatible beliefs may flourish when conditions for economic growth do not exist and they may be rejected as soon as growth becomes possible. While a few religions may teach the discipline of hard work, most of them may discourage a desire for material things and recommend spiritual contemplation. Experiment, which is so essential for growth, may have to be eschewed on the basis of certain religious injunctions, like the objection to a dissection of human or animal body. Some religions are also opposed to a deliberate family limitation. A religion may also become exclusive by a hatred of the unbelievers and a consequent denial of economic opportunities to them. Religions can be extremely restrictive by favouring the maintenance of *status quo,* which is an obstacle to change. Certain religious beliefs may never change, as for instance, the sanctity attached to the Indian cow. Its consequences are never measured in terms of economic values. But it must be admitted that occasionally religion may appear as an innovating force. Innovation with religious support

would be adopted much quicker. For instance, the Bhoodan movement in India is made acceptable on account of its spirituality and it is expected to bring about a peaceful social revolution. Religious beliefs may also be reinterpreted and adjusted to new situations. But beliefs that are passionately held may stifle economic growth.

Family is another important social institution having a bearing on economic growth. The extended family is no doubt a means of social security in a less advanced country. But it may not be appropriate where economic growth has to take place. It would be a drag on effort and initiative. It would diminish mobility and enterprise. Thrift would be discouraged and capital formation may slow down. The restrictions that it might impose on women's work would be a barrier to economic growth. Family tradition may occasionally spur individuals to better work, but a strong sense of it may interfere with vertical social mobility. These remarks however are not applicable to the smaller biological family. Capitalistic motivation of the 19th century emanated from the family loyalties. It offers a spur to effort in order to raise its social status. There is an incentive even for a limitation of its size which would indirectly contribute to economic growth. So it would be desirable to preserve the biological family intact by allowing it such privileges as the right to bequeath. No doubt this may diminish vertical mobility, but by and large the advantages would be in its favour.

From the foregoing account it is difficult to predict any definite correlation between economic progress and institutional change. Institutions may change irrespective of economic growth and economic growth may occur in spite of institutions. When changing economic circumstances force an adjustment of the institutions, the resulting pattern may neither be balanced nor complete. An existing culture may not change in all its aspects and in due proportions. What is fundamental to growth is the seizing of opportunities by the innovators according to the freedom of manoeuvre that the institutions permit. Economic backwardness may impel economic growth and governments with strong nationalist feelings may be determined to promote it.

III

Knowledge is one of the important proximate causes of economic growth. In the pre-scientific era knowledge depended upon

the philosophical attitudes of a people and on their class structure. In the ancient city states the existence of a leisured class with a proneness to metaphysical speculation gave rise to a group of thinkers. During the era of the scientific method, growth of knowledge required a reasoning, questioning and experimental mind. Such a mind could flourish only in countries where religion was free to choose from among many cults instead of being authoritarian. It also required a wide diffusion and liberal exercise of political and economic power. Knowledge grew with a cross fertilization of cultures, facilitated by the geographical situation of a country. Scientific knowledge consists of fundamental principles, their application to technical problems and of commercial exploitation. Under-developed countries may leave pure research and formulation of principles to rich countries but ought to undertake technical research for the application of those principles to their problems, as they are situated differently from those of the advanced countries. They may also borrow social inventions like a good administrative service, free compulsory education or a system of land tenures. But they must exercise care in borrowing, as some of them may be inappropriate for their purpose. Whether new ideas would be borrowed depends largely on the ideas themselves, as they may not work in their environment. Next, it also depends upon the receptiveness of the people. The existing institutions may or may not make it profitable. The new ideas may involve social changes coming in conflict with current taboos and religious doctrines. Ultimately, the adoption of a new idea may warrant an institutional pattern that associates differential effort with differential reward. But most of the under-developed countries are hostile to such differentials; particularly large profits. Still they are a part of the cost of development.

IV

Economic growth will involve certain costs in intangible terms which have to be set off against the benefits of growth. It will require the establishment of a new society having greater leanings towards acquisitiveness. The attitudes and institutions necessary for it are considered undesirable and a stable society may be preferred. When materialism is pursued to its extremes, there is a chance of human happiness being endangered. The costs in terms of nervous energy may outweigh the benefits of the change. There

may also be a disruption of traditional cultures in the process of economic growth. Culture is the learned, socially sanctioned behaviour of a people. The adaptation of a society to new ways of living involves the formidable process of reshaping basic habits that manifest themselves in belief and in behaviour. So an economic change calls for an induced shift in pre-established ends, but traditional culture may resist innovation. It is therefore necessary to recognize that there are cultural and personality factors impeding economic growth, but they may be disrupted if the impact of the change is powerful. It may not be impossible to predict whether a particular innovation would be resisted or welcomed if we knew the scale of values and attitudes of a society's culture and the matrix of its customs and sanctions. Besides, there can also be a measured infiltration of induced cultural innovations into pre-existing patterns. An existing culture provides the base from which exploration into new orientations in living can move, as a culture is never discontinuous. But certain social institutions may suffer extinction through the process of economic growth. The individualistic base of modern economic growth would undermine the extended family and the joint family systems. It would also lead to an erosion of social systems based on caste, age, family, race, etc.

The vertical social mobility that is characteristic of economic growth may lead to a decline of tribal bonds, removing the recognition of the claims of social groups. Some of them are necessary for social health, but may be disrupted with a shift of emphasis to individualism. Thus even though individualism has been a great liberating force, it has weakened social bonds. The western conception of work is based on individual effort, whereas it is communally oriented in greater part of the East; the individual acting as the member of a group based either on kinship or residence. The change from a pattern of collective effort to individualism may meet with resistance, but may cease to be effective with a weakening of the social bonds. When individual initiative is thus induced, his consumption patterns can no longer be dictated by the traditions of a collective system characterized by the joint family, as his incentive for work cannot be fostered. So the change has to be carried to its logical conclusion and the joint family should also be liquidated. Finally, economic growth necessitates the adoption of a reasoning attitude both towards

nature and towards social relations. The reasoning process results in religious agnosticism and it is also incompatible with the acceptance of authority. Hence it is feared that traditional responses may cease to exist. But it is doubtful whether all rational persons should necessarily disbelieve in the existence of God. Reason is not inconsistent with belief in God. Even if it is true, a decline in the belief of God need not be the cause of all the evils of the time. However, economic growth, associated as it is with a reasoning attitude, may undermine the vigour of social sanctions.

V

The process of economic growth under modern conditions implies also an increase in the scale of operations, particularly in the manufacturing industries. This is disliked, as it causes the rise of the proletariat. Current economic history has shown how this dichotomy between the capitalists and the workers has led to serious social tensions creating unrest and disharmony. The organization of industry under the new dispensation requires the imposition of severe discipline among the workers, leaving them no freedom of choice. Technological progress results in greater urbanization and the growth of industrial towns. They disturb the old pattern of living and warrant adjustments which are not always easy to make. But it may be difficult to stop this trend because even improvements in agricultural technique may ultimately cause an exodus of rural population and a congestion in the towns. However, it is not impossible to make the towns more gracious and healthy. Economic growth is also deplored, particularly in backward economies with a traditional pattern of life, as it depends on inequality of incomes. Differential awards are necessary for good work and perhaps to a much higher degree in places where the social organization is faulty. Such disparities in income cannot be reconciled with the ideological basis of social and economic regeneration contemplated by countries that have newly won their political independence. They would at once change their laws of ownership and inheritance of property and impose fresh taxation to alter the distribution, taking away in the process all the incentive for enterprise.

In remote areas economic progress on modern lines will usher in the money economy which will bring about a complete destruction of the structure of family relationship and of the social and

economic system of the group. It will mean the undermining of parental authority and the authority of tradition. On this score it is not unlikely that in certain areas not so far reached by modern economic civilization, growth may be resisted. But this is a cost which is incidental to progress and ought to be borne. Even in the adoption of modern technology there is an intangible human cost which may offer some resistence to growth. The tool is a simple representative of modern technology and it is an extension of the body following the rhythm of the body. Though it enhances and intensifies work, it does not replace or introduce anything basically different. The machine, on the other hand, which is more complicated, is not body patterned. It has its own independent existence and rhythm to which man has to submit. So some resistence may be offered against its adoption by those that are nurtured in a traditional, social and economic organization. An adjustment to the new pattern of work is another social cost which has to be reckoned with in assessing the prospects of economic growth. It is also not uncommon to find the attitudes of some people generally unfavourable to industrialization. They may be unwilling to submit themselves to the discipline of industrial labour. If they were accustomed to a seasonal rhythm in their pattern of work, they would dislike the daily work rhythm of modern industry and it would require a far-reaching process of adjustment for them to reconcile themselves with the new situation. Traditionally, work has always been following a seasonal rhythm according to the call of necessity. So the continuous work of the western oriented pattern of economy is another item of human cost in the process of economic growth. Economic growth may also disturb certain social sanctions in a traditional culture, such as the socially approved expenditure on religious and marriage ceremonies, as they are likely to militate against the formation of capital. It is a psychological effort to surrender some of these long-cherished customs which are part of one's social obligations.

VI

So far the costs of economic growth have been considered. There are however several important benefits accruing from economic growth which have to be set off against the costs. Economic development enables a greater control over the environment and thus increases the range of human choice. Though it

may not necessarily result in greater human happiness, it increases freedom as the effort in relation to output is reduced. Less work would be required to satisfy human wants and greater leisure would be available for fostering other values of life. The most primitive contribution that economic growth can make is to free life from the menaces of nature. Nature is often harsh and niggardly, subjecting human life to disease and scarcities of essential things. A liberation from them is of great social importance. With an assurance of basic necessities and a release of human energy for other services, a country can have more of the good things of life. With greater leisure there would be popular opportunities for the enjoyment of art and literature; instead of its being a proud privilege of a leisured class. With increased output and a better appreciation of life with greater leisure, there can develop a more humanitarian outlook and the weak and the disabled may be helped in various ways. Under certain circumstances, economic growth may become a necessity. The demand for higher wages, for instance, cannot be met without creating social tensions, unless growth and increased productivity are attained. Wherever political aspirations are higher in relation to economic resources, technological development is a primordial necessity to avoid political upheavals. Countries grow richer with economic growth and thereby acquire a higher international status in the political sphere.

VII

Since costs and benefits of economic growth are equally matched, a way of fostering economic patterns and social values has to be found while encouraging development on modern lines. While there should be no blind preservation of old values, certain economic patterns and social values that are threatened to be undermined ought to be fostered. The village contact of industrial labour in India, often criticised as the cause of the migratory tendency among them, is a necessity in the economic and social context of the country. In the absence of a scheme of Social Security with a wide coverage, the rural contact assumes the role of social insurance. Similarly, measures towards the decentralization of industry in India are meant not only to encourage the rural contact and reduce undue urbanization but also to avoid the disruption of the family, as the traditional Indian culture has had a familial structure. It may be necessary even to arrange for

the migration of the whole family when modern technology makes a demand on rural labour. The solicitude shown towards the cottage and small-scale pattern of industry in India which is threatened with extinction, is meant as much for the preservation of artistic culture and social values as for making the scarce capital resources of the country go as far as they can in the creation of employment.

In conclusion it may be helpful to point out that there has always been an element of exaggeration in depicting both the costs and benefits of economic growth. A realistic appraisal of the pros and cons of growth is essential for the implementation of policy. Some of the alleged costs of economic growth are not unavailable and need not be borne. For instance, ugly towns are not an inevitable consequence of growth. Similarly, some of the alleged evils are not intrinsically wicked, as for instance, the tendency towards individualism or the unexpected by-products of reasoning. They need not be expected to yield always unhappy results. On the other hand, the undesirable consequences of growth may be due to the rate of growth being too high for the health of a society. Excessive materialism, excessive individualism or excessive inequality of incomes may be harmful and involve substantial costs in social or spiritual terms. Such excesses may well be avoided without jettisoning economic growth. Finally, it has also to be realised that the transition to a new equilibrium may be painful, as it should witness the destruction of old social harmonies and the formulation of a new code of behaviour. Still it cannot be delayed owing to certain compelling factors, like the pressure of population on resources in under-developed areas.

IV

THE SANCTITY OF THE COW IN HINDUISM

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I

The purpose of this paper is to identify those notions which have been critical in the formation of the Hindu doctrine that the cow has a special sanctity and inviolability giving it a position above all other animals and precluding the eating of its flesh. Most of these notions appear in the period of the Vedas, though the doctrine of the cow's sanctity does not come into existence until after that period. The doctrine is essentially one concerning the cow; the accompanying sanctity of the bull seems to be more obscure in origin and likely to stem in large part from non-Aryan sources. It will not be treated in this paper.[1]

The doctrine of the cow's sanctity seems to be influenced only tangentially by notions originating in non-Aryan cultures. For example, it cannot be shown to derive from the civilizations of the Indus Valley in the third and second millennia B.C. It is true that representations of the bull and the ox appear on seals and among the terra-cotta figurines of the Harappa culture, and that some of these have been considered to have a religious significance, but they appear relatively seldom, less frequently, it happens, than representations of the well-known Indus Valley "unicorn," and the cow is ignored, at least in the terra-cottas.[2] The interpretation of these representations is at best problematic, and it is unwarranted to conclude that the scenes of bulls goring human beings indicate anything about the animal's sanctity.

1. Cf. J. H. Hutton, *Caste in India*, 1946, pp. 10, 131, 196. There is a wealth of allusions to sanctity of the bull in the many ethnological studies dealing with India

2. R. E. M. Wheeler, *The Indus Civilization* (supplementary volume to the Cambridge History of India), 1953, p. 68.

Neither does it seem possible to attach importance for the development of the doctrine to such phenomena as the buffalo or bull used as a scapegoat,[3] or the use of cowdung as a purificatory substance for washing the walls and floors of houses, or the abhorrence of the cow and its milk by the Shins in Gilgit,[4] or the common designation of the bull as Shiva's vehicle or the dedication of bulls to him. These various notions are not accompanied by a doctrine that the cow, bull, ox—cattle in general—are inviolable and their meat forbidden.

Before advancing suggestions of the origin of the sanctity of the cow in Indo-Aryan society it seems in order to review briefly the attitude toward cattle, especially the cow, in Vedic and early post-Vedic literature. In the total mass of Vedic literature the cow, the bull, and the ox collectively cattle, are mentioned more frequently than any other species of animal. It is doubtful if any other large body of literature, belonging to any other people in any period, gives that animal so much importance. The Veda has a couple of dozen or more separate specialized words for cattle, as for heifer, barren cow, cow that has ceased to bear after having one calf, four-year old ox, three-year old ox, large castrated ox, and other kinds of differentiation. Cattle or herds of cattle or the products of the cow are the standard items mentioned in descriptions of wealth. Cattle constituted the great booty in war. No other animal was so much appreciated for its economic value. The cow or ox was an asset in producing food directly through its milk and flesh and in serving as assistance for agriculture and for transportation. All these phases of the cow's or ox's usefulness are abundantly stressed in Vedic literature, especially in the Rig Veda.

Besides its economic role, the cow and bull and ox had an important ritualistic function in the Vedic sacrifice, which was the center of the Vedic religion, a function not remotely approached by any other animal. Cattle were the chief sacrificial victims and the products of the cow were the oblation (havis). So, too, no

3. H. A. Rose, *A Glossary of the Tribes and Castes of the Punjab and North-West Frontier Province* (Lahore, 1919), vol. 1, p. 140.

4. F. Drew, *Jammoo and Kashmir Territories*, London, 1875, p. 428.

other animal figures so frequently in simile or metaphor applied to a wide range of subjects—the phenomena of nature, such as dawn or rainfall or streams; deities, both male and female; human beings; the paraphernalia of the sacrifice such as the stones for pressing out the soma, whose sound as they rub together may be spoken of as the bellowing of bulls, or the soma drops offered in the sacrifice, which may be called bulls because of their power.

Yet in all this richness of reference to cattle there is never, I believe, a hint that the animal as a species or the cow for its own sake was held sacred and inviolable. And further there is no knowledge whatever in Vedic literature, except at its very end, of the wide doctrine of Ahiṃsā, non-injury of living creatures, which in modern Hinduism covers not only mankind but the entire animal kingdom, with special emphasis on the cow. On the contrary, the animal sacrifice is a well established feature of the Vedic religion;[5] it included both ox and cow;[6] and the priests ate the flesh after it had been offered.[7] Further, the cow was regularly used as food in circumstances calling for elaborate entertainment. For a special guest, such as "a king or a Brahman," one "would cook a large ox or a large he-goat."[8] A great king of the Rig Veda named Divodāsa is frequently mentioned by an epithet Atithigva, meaning "he who [always] has a cow for a guest."[9] There was a special term for the ceremony of such entertainment (go-argha "cow offering") and the celebrant "prepared or did the cow" (gāṁ kurute).[10] The eating of meat seems to have been a common enough occurrence in Vedic society for those who could afford it. Consequently at the ceremony of consecration when various purificatory and self-denying personal observances, such as shaving and bathing, are prescribed, one of them is abstention from eating beef, whether of the milch cow (dhenu) or of the ox (anaḍuha). A myth is related to support the rule. But the celebrated Vedic sage Yājñavalkya, whose name figures as a great authority in the

5. A. B. Keith, *Religion and Philosophy of the Veda*, pp. 324-326.
6. *RV.*, 8.43.11.
7. H. Oldenberg, *Religion des Veda*, p. 355.
8. *Śatapatha Brāhmaṇa*, 3.4.1.2.
9. M. Bloomfield, *Journal of the American Oriental Society*, vol. 16, 1894, p. cxxiv.
10. M. Bloomfield, *loc. cit.*; E. W. Hopkins in *Cambridge History of India*, vol. I, p. 232.

fields of both ritual and metaphysical speculation, would have none of the prohibition. Said he, "I, for one, eat it (beef), provided that it is tender (aṃsala)."[11] In another passage the yearly performance of the animal sacrifice, which the text says means "cattle," is recommended for perpetuating the sacrificer's own herds, for, says the text, "flesh is the best kind of food."[12]

In the Sūtra literature meat-eating is taken for granted. The laws of Āpastamba, for example, merely restrict the manner of killing the animal; the text says, "He (the Brahman householder) shall not eat meat which has been cut with a sword (or knife) used for killing."[13] Again, the laws of Gautama forbid a Brahman to eat the flesh of a number of kinds of animals including milch cows and draught oxen, except those slain for sacrifice.[14]

There is an item in Vedic literature which has seemed to some scholars to imply or foreshadow the later wide Hindu doctrine of the inviolability of the cow. This item I believe to be overstressed, if not actually misinterpreted. It concerns the stem ághnya/aghnyá, which means basically "not to be slain" and is used four times in the Rig Veda and the Atharva Veda as a masculine noun equivalent to "bull" or "ox" and 42 times with a feminine ending to mean "cow." The question is why the cow or the bull or the ox should be characterized as "not to be slain." Is the answer that these animals were acquiring sanctity and inviolability? This is the interpretation given by Macdonell and Keith.[15] Or is the answer something else? I believe that it is the latter. The problem is really confined to the frequently occurring feminine stem; the infrequent masculine stem[16] seems to be merely a reflex of the feminine, as if a speaker of English were to use an expression "male

11. *Śatapatha Brahāmaṇa* 3.1.2.21. The word *aṃsala* may mean "coming form the shoulder" or "firm" (presumably because not decomposed; see J. Eggeling, *Sacred Books of the East*, vol. 26, p. 11; A. A. Macdonell and A. B. Keith, *Vedic Index*, vol. II, p. 145; and note the prohibition in the *Arthaśāstra* 2.26 against selling rotten meat.

12. *Śatapatha Brāhmaṇa* 11.7.1.1-3; for translation see J. Eggeling, *Sacred Books of the East*, vol. 44, pp. 118-119.

13. Āpastamba 1.5.16; translated by G. Bühler, *Sacred Books of the East*, vol. 2, p. 59.

14. Gautama 17.30 and 17.37; translated by Bühler, *op. cit.*, pp. 266, 267.

15. A. A. Macdonell, *Vedic Mythology*, p. 151; A. A. Macdonell and A. B. Keith, *Vedic Index*, vol. II, p. 146.

16. *RV.*, 1.30.9; 1.37.5; 3.33.13; *AV* 14.2.16 (= *RV.*, 3.33.13).

cow" (cf. Sanskrit Puṃgava). The feminine aghnyā, I suggest, could mean or imply that the cow which it designates is not to be slain because it is productive and of economic value; that is, it has or could have a calf, or it gives or could give milk, and is not barren, economically without value.

If we survey rapidly the 42 occurrences of the feminine stem in the Rig Veda and the Atharva Veda we can see that this interpretation is not implausible. In three passages aghnyā is used as an appositive to dhenu "milch cow" (RV 4.1.6; 8.69.2; 9.1.9.). In 12 passages the text refers to the animal's ability to give milk (RV 1.164.27; 7.68.8,9; 10.60.11; 10.87.16; AV 6.91.2 [= RV 10.60.11]; 7.73.8 [= RV 1.164.27]; 8.3.15 [= RV 10.87.16]; 12.5.58,60,63,65 [and cf. 23]). One passage refers to the animal's swollen udder (RV 9.93.3). Eight mention its calf (AV 3.30.1; 6.70.1,2,3; 9.4.2, 4,17,19). Four use the word as an epithet of the cosmic waters, which are regularly stated to have the sun as their embryo or calf (RV 9.80.2 [?]; 10.46.3) [possibly the reference is to the Cloud as the mother of Agni = the lightning]; (AV 7.83.2; 19.44.9). In one passage (RV 8.102.19) a sacrificer complains that he is handicapped in performing the sacrifice because he has no cow (presumably to supply the milk and its products needed as offerings) and no axe (presumably to cut the wood for the sacrificial fire). In seven other passages the text implies, though it does not definitely assert, that the cow or cows mentioned can bear: in one of these (RV 10.102.7) the word aghnyā is used of cows which are said to have a lord or husband (pati); in one, rainfall is besought of the storm god Parjanya to nourish the cows (RV 5.83.8); in three others, the word is applied to the sacrifice metaphorically called a cow (AV 10.9.3,11,24); in one, it is applied to the cow (vaśā) which is the all-producing and all-containing universe (AV 10.10.1); and in one, it is probably, but not certainly, meant to indicate the anustaraṇī cow (AV 18.3.4), which is slaughtered in the funeral ceremony—and is therefore, in spite of its epithet, not inviolable in any absolute sense.[17] In the remaining six occur-

17. The anustaraṇī cow is normally one that has not calved (*Śatapatha Brāhmaṇa* 4.5.2.1ff.). In the Atharva Veda stanza the aghnyā cow is to accompany the dead man to heaven (svarga); he is her herdsman or lord (gopati) and she is to enjoy him (tāṃ juṣasva); she is possibly the same female who is mentioned in the preceding stanza of the hymn as a maiden (yuvati).

rences of aghnyā (RV 1.164,40; 8.75.8; AV 7.73.11 [= RV 1.164. 40]; 8.7.25; 18.4.49; 19.16.2) the context is either inconclusive or obscure. But in no passage is the context such as to exclude the interpretation that the cow is called "unslayable" because it is still economically productive. The word aghnyā is not used in association with words which mean a barren cow (starī, dhenustarī) or a cow barren after calving (sūtavaśā) or one which miscarries (vehat), nor is it used with the word vaśā when the latter is applied to a barren cow.[18]

Lesser items from Vedic literature have been cited in support of the idea that either the wide doctrine of Ahiṃsā or the narrow doctrine of the inviolability of the cow appears or is presaged in Vedic literature. Keith alludes in this connection to the prohibition against beef-eating at the consecration ceremony mentioned above.[19] The text (Śatapatha Brāhmaṇa 3.1.2.21) says that one who eats beef is likely to be reborn as a man of evil fame. But it is clear from the context that this result follows only if he eats the beef in the consecration hall. Keith also refers in the same place to the evil consequences for one who eats the Brahman's cow (AV 12.4), but here again the inference is unwarranted. It is quite clear from the context that the punishment follows not because the animal eaten is a cow but because it belongs to the Brahman as his right.[20]

Still another passage is cited by Keith in this connection. In it (Kauṣītaki Brāhmaṇa 11.3, inadvertently cited as 12.3), he says, "are warnings of retribution in the next world which are offered to eaters of meat in this."[21] The context again makes clear that this interpretation is incomplete and misleading. The text deals with the usage of various metres in the morning sacrificial litany, and the section in question explains why two of these metres, the Bṛhatī and the Uṣṇih, should be used. By using them the priest encircles the cattle and confers them upon the patron of the sacrifice. If the priest does not use these metres and thus encircle the cattle with them, then, just as in this world men eat cattle, so in the

18. Cf. Macdonell and Keith, *Vedic Index*, vol. II, p. 273; M. Bloomfield, *Hymns of the Atharva-Veda*, translated in *Sacred Books of the East*, vol. 42, pp. 656, 658.

19. A. B. Keith, *Religion and Philosophy of the Veda*, p. 192.

20. M. Bloomfield, *loc. cit.* See below in this paper.

21. Keith, *loc. cit.*

next world the cattle of the patron of the sacrifice will eat him. But if the priest does use these two metres, then in the next world the cattle will not eat the patron of the sacrifice in requital. Rather the patron, just as he eats and enjoys the cattle in this world, will eat and enjoy them in the next world. The warning issued in the text is not against eating cattle but against omitting a certain portion of the sacrificial ritual.[22]

The various passages cited from Vedic literature show no knowledge of the doctrine of the sanctity and inviolability of the cow or of cattle. Rather Vedic literature points to a general practice of offering cattle as sacrificial victims and a widespread custom of eating their meat.

Vedic literature is also silent on the wide doctrine of Ahiṃsā until its very end and then alludes to it in only the barest manner. The doctrine of Ahimsā makes its real appearance with Jainism and Buddhism in the 6th and 5th century B.C., a time which corresponds to the closing centuries of the Vedic period. Mahāvīra and the Buddha gave Ahimsā the principal place in their ethical systems. In the Vedic literature of approximately this same period Ahiṃsā makes a brief appearance. There is a single occurrence of the word in the early Upanishads, those attached to Brāhmanas, where it is listed inconspicuously with a number of other virtues suitable to be a priest's gifts; the others are austerity, almsgiving, rectitude, truthfulness (atha yat tapo dānam ārjavam ahiṃsā satyavacanam iti tā asya dakṣiṇāḥ).[23]

When we leave the Vedic period and pass to that of the rise and formation of characteristic Indic civilization we find the idea of Ahimsā and the doctrine of the sanctity of the cow slowly gaining status in Brahmanical circles. The period is roughly from about the 5th century B.C. to the 4th century A.D. During it a number of important texts have allusions of greater or less explicitness to these notions.

One of these is the Bhagavad Gītā. In it the sanctity of the cow is not mentioned at all and the wider doctrine of Ahiṃsā is

22. For a translation of the passage see A. B. Keith, Ṛigveda Brāhmaṇas, The Aitareya and Kauṣītaki Brāhmaṇas of the Ṛigveda, *Harvard Oriental Series*, vol. 25, 1920, p. 409.

23. *Chandogya Upanishad* 3.17.4.

little developed. The Bhagavad Gītā uses the word Ahiṃsā four times (10.5; 13.7; 16.2; 17.14), and each time with no special significance but rather in a catalogue of human characteristics, good and bad (10.5) or of the content of knowledge (13.7) or of virtues (16.2) or of the elements of bodily austerity (17.14). It never elaborates on Ahiṃsā as a doctrine; rather its attitude is the opposite. Krishna's teachings are meant to dispel Arjuna's qualms at shedding the blood of his opponents and his corresponding willingness to submit unresistingly to their weapons (1.28-47). In this purpose Krishna is successful and Arjuna leads his side to battle and victory (18.73). As F. Edgerton remarks: "....some lip-homage is paid to it (Ahiṃsā). But it is never definitely and sharply applied in such a form as 'Thou shalt not kill.'"[24]

Next I would like to refer to the laws of Manu. This work is equivocal on the subjects of Ahiṃsā and the inviolability of the cow. On one side it prescribes that a student of the Veda, who is of course a Brahman, should avoid flesh, along with honey, perfume, garlands, women, gaming, and other harmful things (2.177; 11.159), and includes Ahiṃsā with truthfulness, non-stealing, purity, and restraint of the senses in a summary of the duties of the four classes of society (10.63). Again it says that he who eats the meat of any animal in this world will be eaten by that same animal in yonder world (5.55). In another stanza it forbids injury to cows, along with injury of one's teacher, a reciter of the Vedas, one's father, mother, spiritual preceptor, Brahmans, and all ascetics (4.162). In still another (11.60) it includes cow-slaughter (go-vadha) in a long list of crimes. These passages support Ahiṃsā and the sanctity of the cow, but there are others which essentially deny the doctrines. One of the latter classifies animals ino those which may and those which may not be eaten (5.11 ff.). Another specifically says, "One should eat flesh which has been consecrated, and at the desire of Brahmans, and when duly required, and in danger of life. Prajāpati made all this food for life; both movable and immovable, all is food for life. The immovable (things are) food of those that move about; the toothless, of those with teeth (or fangs); those without hands, of those with; the cowardly [such as deer], of the bold [such as the tiger]. An eater who even day by day eats eatable living beings is not polluted, for the eatable

24. *The Bhagavad Gītā,* vol. 2, p. 83.

living beings were created by the creator as well as the eaters" (5.27-30).[25] The general position of Manu's law book is that one should eat consecrated flesh, but not unconsecrated flesh; that is, he should not eat flesh which has not been offered in sacrifice (5.36-38). By eating consecrated flesh he does good both to himself and to the slain animal (5.39-42). But if he does not eat it, he will be reborn as a beast for twenty-one existences (5.35).

Another celebrated text of the same general period which is ambivalent on these questions, is the Arthaśāstra. In this work the sale of meat is recognized as legal, and butchers are required to see that the meat they sell is fresh; however, cattle—calf, bull, milch cow—were not to be slaughtered (2.26). If cattle are wrongfully grazed in land not belonging to their owner they may be driven out but are not to be injured (3.10). The institution of setting free a bull consecrated to a deity to wander is recognized (3.10). These passages favour the cow. But another passage refers to "cattle which are fit only for the supply of flesh" (2.19), thus indicating that not all cattle were inviolable. Possibly the text implies that these animals were otherwise economically worthless and expresses an idea similar to that which I suggested above lies at the bottom of the use of the Vedic word aghnyā.

The Mahābhārata, taken as a whole, shows Brahmanic rule and popular practice to be at variance. In one passage the text states that he who kills a cow lives as many years in hell as there are hairs on the cow's body (13.74.4; cf. Ordinances of Manu 5.38), and various other passages command Ahiṃsā. Yet elsewhere meat-eating is mentioned in a casual manner and the existence of a butcher shop is nothing out of the ordinary (3.207).[26]

The Buddhist records during this same period also show that the doctrine of Ahimsā was not well established in popular practice, though the Buddhists and Jains were promoting it zealously. Asoka, on being converted to Buddhism (perhaps around 262 B.C.), became an unswerving adherent to the doctrine of Ahiṃsā. He instituted a strict set of rules to enforce it, which are recorded in his Pillar Edict V, and appointed officers to enforce these and other moral legislation (Rock Edicts V, XII; Pillar Edict VII).

25. Following generally the translation in A. C. Burnell and E. W. Hopkins, *The Ordinances of Manu,* 1884, p. 114.

26. E. W. Hopkins, in *Cambridge History of India,* vol. I, p. 271.

Yet the Pali texts make it clear that hunters, trappers, and butchers were recognized traders, and there were shops to handle their wares.[27] About sixty years after Asoka's death a Hindu dynasty arose in his capital, whose founder Puṣyamitra is said to have revived the horse-sacrifice, as was recorded without shock about five centuries later by Kālidāsa in the Mālavikāgnimitra. Both Puṣyamitra's dynasty (the Śungas) and the following dynasty (the Andhras) are said to have reinstituted the old Vedic animal sacrifices.[28]

When we get to mediaeval India we find that the doctrines of Ahiṃsā and the sanctity of the cow are still fighting their way against popular resistance or apathy. The Buddhist emperor Harsha (606-647 A.D.) endeavoured to enforce the doctrine of Ahimsā and imposed penalties for its violation up to and including capital punishment, according to the Chinese pilgrim Hsüan-tsang, who visited India 630-644.[29] Various other rulers endeavoured to enforce Ahimsā, of whom one was the Jain convert King Kumārapāla, who reigned in Gujarat 1142-1172. He is stated to have imposed the death penalty upon an unfortunate merchant who was found in possession of meat near a sanctuary in the capital city of Anhilwāḍapatan, according to the Prabhāvakacarita 22.823-830.[30] Hindu monarchs gave the doctrine of Ahiṃsā greater or less support, especially when they felt strong enough to enforce it. For example, the historian Kalhaṇa records instances in the Rājataraṅgiṇī (3.5-6; 5.119).

The bulk of mediaeval Brahmanic literature and even the later strata of the Mahābhārata treat Ahiṃsā and the sanctity of the cow as established doctrine and ignore such evidences of dissidence as we have been noticing above. For example, a long section of the Mahābhārata (Anuśāsana parvan 76-83) is devoted to inculcating worship of the cow. The doctrine of the cow's sanctity and inviolability is also well elaborated in the Purāṇas.[31] The epic, the Purāṇas, and a great mass of ancillary literature express the idea of the cow's sanctity in the form which modern Hinduism

27. Mrs. C. A. F. Rhys Davids in *Cambridge History of India*, vol. I, pp. 207, 215.

28. L. Renou, *Religions of Ancient India*, p. 100.

29. S. Beal, *Buddhist Records of the Western World*, vol. I, p. 214.

30. G. Bühler, *Ueber das Leben des Jaina Mönches Hemachandra*, p. 39.

31. H. Jacobi in *Encyclopedia of Religion and Ethics*, vol. IV, p. 225 f.

accepts as orthodox, and on their authority the doctrine is so firmly fixed in dogma, whatever the case may be with practice, that it is possible for a modern authority on Hinduism to say that caste, rebirth, and the sanctity of the cow are the principle tenets of Hinduism on the popular level.[32]

Let me now summarize this discussion of the history of the doctrine of the cow's sanctity. It does not appear at all in Vedic literature. The general Buddhist and Jain, and later Hindu, doctrine of Ahiṃsā appears at the end of the Vedic period and at that time enters the stream of Brahmanical religious teaching, but the doctrine of the special sanctity of the cow is not at first associated with it. The sanctity of the cow is first recorded in works composed close to the beginning of the Christian era, though the texts of that time treat it equivocally. The doctrine gets a strong position by the time of the completion of the Mahābhārata, say at the beginning of the Gupta dynasty, about the 4th century A.D. Its position is made firm doctrinally in Brahmanical circles in the period of composition of the Purāṇas, and it becomes widely diffused among the Hindu community, gaining ever increasing prestige, from that time on.

II

It seems possible to recognize a constellation of at least five elements which have produced the doctrine of the sanctity of the cow. These are: the importance of the cow and its products for the performance of the Vedic sacrificial ritual; the figurative uses of words for the cow in Vedic literature and the later understanding of these figurative expressions as indicating literal truth; the prohibitions against violation of the Brahman's cow; the inclusion of the cow under the general doctrine of Ahiṃsā; and the association of the cow with the mother-goddess cult.

The importance of the cow in the Vedic ritual and the increase of esteem for the cow in consequence of that importance have already been recognized in other discussions of the cow's sanctity in India.[33] The use of the cow as a sacrificial animal and of its products as offerings in the ritual fire has been mentioned above in this paper, is widely known, and has been well covered in various

32. J. N. Farquhar, *A Primer of Hinduism*, section 115.
33. H. Jacobi, *loc. cit.*

descriptions and analyses of the Vedic sacrifice. It need not be elaborated here. But that element in itself is not sufficient to account for the cow's sanctity. Other ideas have been added to it.

The importance of the figurative uses of words for cow, bull, ox in Vedic literature require more specific statement in our present discussion. No symbol of fecundity or maternity or source of nourishment compares in the Veda to the cow. No symbol of virility compares to the bull. Any female at all, whether a deity like Uṣas, or a cosmic element like the Waters (āpas), or a human queen, or just a beautiful young woman (RV 10.95.6) seems flattered if she is called a cow or compared to a cow or is characterized as a mother of cows (RV 4.52.2). And, of course, a heroic god like Indra or Agni, or a human being is gratified to be lauded as a bull. The very gods are said to be born of a cow (gojāta). I think I can say without needing to make a count that the words for cow and bull are used as epithet or in simile and metaphor with reference to entities of the highest religious significance much oftener than in their primary sense with reference to actual animals.

There are a few of these uses which I wish to mention with some pointedness. One is the characterization of the cosmic waters as cows. In the Vedic creation myth, where the god Indra is cast as the hero, the change of the cosmos from its uncreated or pre-created chaotic state to one operating by law (ṛta) requires first of all that these Waters should be released from confinement. Vṛtra has been holding them in a cave. When Indra slays Vṛtra, the Waters, now released, come forth like lowing cows (RV 1.32.2). Not only do they appear as cows, but they are, it happens, pregnant, and they give birth to the Sun, who is called their Calf (vatsa). Thus moisture, warmth, and light are made available in the universe. Cosmic law (ṛta) is established, the earth is spread out and the sky is extended above it, the sun is put on its course, gods and men are assigned their respective functions (vrata). This is how our universe of earth, atmosphere, and sky came into existence.[34] Throughout the Veda the cosmic Waters are described in simile or metaphor or by epithet as cows, motherly cows, cows of plenty. So, too, in another mood the rain clouds

34. See W. Norman Brown, *Journal of the American Oriental Society*, vol. 62, 1942, pp. 85-98.

may be called cows and they have a calf which is the lightning. And Agni, the god of the Vedic sacrifice and the counterpart on earth to the lightning in the atmosphere and the sun in the sky, is called "Son of the Waters" (apāṃ napāt) or "the bull, who has grown great in the lap of the Waters" (RV 10.8.1). All life depends upon Waters. They purify their worshipper and give healing, both physical and moral. They are, in short, both sanctified and sanctifying, and when they are called cows they invest the cow, at least for the time being, with a part of their sanctity.

Another important feminine figure of the Veda who is frequently called a cow is Aditi. Aditi is a personification of a pure abstraction. Her name means "boundlessness, freedom, expansion." Aditi is the spirit or attitude or force of change which at the beginning of things led to creation, and as such stands in contrast to the spirit or attitude or quality of conservatism or restraint which would have prevented creation. In the creation myth the forces leading to or inducing change and creation are personified as her sons (aditeḥ putrāḥ) and called Ādityas, that is, promoters of expansion, in contrast to the Dānava Vṛtra, who stood for binding or non-expansion and is called son of Dānu ("restraint"). By getting Indra to fight their battle against Vṛtra and kill him and so to release the waters when the "covering" (vṛtra) has been split or removed, they give the impetus to the process of creation. In the late Rig Veda Aditi receives a certain amount of personality as a personification of the cosmic generality. Says a stanza (RV 1.89.10): "Aditi is the sky; Aditi is the atmosphere; Aditi is the mother (earth?); the father (sky?); the son (Indra? or Agni?); Aditi is all the gods and the five folk; Aditi is what is born; Aditi is what is to be born". Since her name means "freeing" she acquires a moral function and is conceived as freeing from sin. She is also connected with light, which spreads far and wide. She is called a milch cow (dhenu) who issues full streams [of blessings] for pious folk who make the oblation" (RV 1.153.3). In the soma ceremony her name (aditi) is used as an epithet of that cow whose daughters are the milk sought by the masculine element soma, here compared to a tawny bellowing bull inflamed with lust (hārir akrān ...... nṛmṇā́ śíśāno mahiṣó ná śobhate). Again, in another passage dealing with the same ceremony (RV 9.96.15) Aditi is said to pour out milk (páyo ná dugdhám áditer iṣirám). In a different sort of context (RV 10.11.1) Aditi has an active undeceivable bull as her son—just who is meant is uncertain, perhaps Agni or Indra—

who milks from her the streams of heaven's milk for another bull, perhaps the Sun (vṛ́ṣā vṛ́ṣṇe duduhe dóhasā diváḥ páyāṃsi yahvó áditer ádābhyaḥ). In the performance of the Vedic ritual she is symbolized by a cow, as is also the personified sacrificial food, consisting of the cow's products milk and butter and called Iḷā or Iḍā.[35]

There is no need to be exhaustive about the comparison or symbolism or identification of Aditi with the cow. I would only call attention to one more feature of Aditi's mythology, namely her identification with the earth. This may possibly appear in the Rig Veda and the Atharva Veda (RV 1.72.9; AV 13.1.38), where Aditi is described as pṛthivī (cf. RV 4.55.1; 7.62.4, where Sky and Earth are possibly equated with Aditi, and note RV 1.89.10, which is quoted above). The word pṛthivī "the wide one" (fem.) is the commonest of all the words for earth in the Rig Veda, as it probably is in post-Vedic Sanskrit as well. Whether the application of pṛthivī to Aditi in the Rig Veda and Atharva Veda merely means that she is wide extending or instead means that she and the earth are identical, there is no doubt that the latter identification does occur in Vedic ritual literature.[36] And the earth, it happens, is another feminine entity which, under the name of Pṛthivī or Mahī, is called a cow in the Rig Veda (4.41.5; 10.133.7; perhaps also 10. 67.5; 10.101.9). A little later in time, in the great hymn of the Atharva Veda (12.1) to the goddess Earth (Pṛthivī), she mates with the bull Indra (stanzas 6, 37), milks benefits for her worshippers (stanzas 7, 9, 10) as a steady cow that does not kick when being milked (stanza 45), has sweet milk in her udder (stanza 59), is Aditi yielding milk as desired (stanza 61).

The equation in Vedic literature and thought of Aditi, Earth, and Cow is recognized in the Naighaṇṭuka (1.1.4-5; 2.3.16), where cow (go) is synonymous with many things including earth, heaven, speech (Vāc), Aditi. The use of the word or words for "cow" had by then grown from a descriptive figure of speech applied in compliment to feminine entities until it had become a symbol of the holiest of those entities and had finally won identity with them. The metaphor or symbol had run away from those who employed it. They had ceased to distinguish it from the objects it

35. A. B. Keith, *Religion and Philosophy of the Veda*, pp. 200, 270.
36. A. A. Macdonell, *Vedic Mythology*, p. 121.

had been meant to adorn or to represent, and thus the cow had acquired their holiness as a quality of its own.

The third item of Vedic practice and thought which I want to relate to the doctrine of the cow's sanctity is that of the cow as the Brahman priest's sacrificial fee. The cow was the characteristic fee and the name of the fee, dakṣiṇā, means "the richly milking one." The interest of the Vedic Brahman in his fee has been vividly described by M. Bloomfield.[37] There are many references in Vedic literature to the Brahman's cow, his right to it, and the dire consequences that will befall one who withholds it or injures or misappropriates it and the corresponding benefits accruing to him who bestows it. The Brahman's cow is equated with Aditi and the Earth and all else that is full of good for the pious. The Rig Veda develops the theme in several places, one of which I quote (RV 8.101.15-16). It consists of two threatening stanzas couched in riddlesome language: "Mother of the Rudras, daughter of the Vasus, sister of the Ādityas, navel of the nectar (immortality)—to one who can understand let me proclaim this, 'Injure not the guiltless cow Aditi!' [Then Aditi speaks:] 'Me, who know the spell, raising up the sacrificial voice (vācam) inherent in all pious devotions, a goddess arrived from the gods, me, the cow, the mortal of slight intelligence has appropriated as his own.' "[38] The Atharva Veda has four hymns devoted exclusively to guaranteeing the Brahman secure possession of his cow, or in a wider sense of all his property (5.18; 5.19; 12.4; 12.5). To injure the Brahman's cow is to injure the Brahman himself and thus to violate the very ordinances of the cosmos. Let me quote a few stanzas from these hymns in Bloomfield's lively translation:[39]

[from 12.4]

2. With his offspring does he trade, of his cattle is he deprived, that refuses to give the cow of the gods to the begging descendants of the Ṛṣis.

37. *Religion of the Veda,* pp. 69 ff.; Hymns of the Atharva Veda (*Sacred Books of the East,* vol. 42, pp. 430, 656).

38. The first stanza is used in the guest ceremony, Pāraskara Gṛhya Sūtra 1.3.26.

39. Bloomfield, *Hymns of the Atharva Veda,* pp. 169-172; 174-179.

3. Through (the gift of) a cow with broken horns his (cattle) breaks down, through a lame one he tumbles into a pit, through a mutilated one his house is burned, through a one-eyed one his property is given away.

6. He that pierces her ears is estranged from the gods. He thinks: "I am making a mark (upon her)," (but) he diminishes his own property.

11. For those that come requesting her the cow has been created by the gods. Oppression of Brahmans it is called, if he keeps her for himself.

[from 5.18]

1. The gods, O king, did not give to thee this (cow) to eat. Do not, O prince, seek to devour the Cow of the Brāhmaṇa, which is unfit to be eaten!

2. The prince, beguiled by dice, the wretched one who has lost as a stake his own person, he may, perchance, eat the cow of the Brāhmaṇa, (thinking,) "let me live today (if) not tomorrow!"

7. He swallows her (the cow), bristling with a hundred hooks, (but) is unable to digest her, he, the fool who, devouring the food of the Brahmans, thinks, "I am eating a luscious (morsel)."

10. They who ruled over a thousand, and were themselves ten hundred, the Vaitahavya, when they devoured the cow of the Brāhmaṇa, perished.

[from 5.19]

3. They who spat upon the Brāhmaṇa, who desired tribute from him, they sit in the middle of a pool of blood, chewing hair.

4. The cow of the Brāhmaṇa, when roasted, so far as she reaches does she destroy the lustre of the kingdom; no lusty hero is born (there).

5. A cruel (sacrilegious) deed is her slaughter; her meat, when eaten, is sapless; when her milk is drunk, that surely is accounted a crime against the Fathers.

10. King Varuṇa pronounced this (to be) poison, prepared by the gods: no one who has devoured the cow of a Brāhmaṇa retains the charge of a kingdom.

12. The kūdī plant (Christ's thorn) that wipes away the track (of death), which they fasten to the dead, that very one, O oppressor of Brahmans, the gods did declare (to be) thy couch.

13. The tears which have rolled from (the eyes of) the oppressed (Brāhmaṇa), as he laments, these very ones, O oppressor of Brahmans, the gods did assign to thee as thy share of water.

14. The water with which they bathe the dead, with which they moisten his beard, that very one, O oppressor of Brahmans, the gods did assign to thee as thy share of water.

15. The rain of Mitra and Varuṇa does not moisten the oppressor of Brahmans; the assembly is not complacent for him; he does not guide his friend according to his will.

It is clear from these hymns that the Brahman's cow is a sacred and forbidden cow, by cosmic decree, for all but the Brahman; or at any rate it is clear that the Brahman authors of these hymns wanted the rest of the world to think so. After hearing such imprecations and curses as these hymns express, that king must have been a chilled and hardened atheist who withheld the cow that was due the Brahman or took it or any other property away from the Brahman who owned it.

It should be noted that though the Brahman's cow is sacred, it is not sacred because it is a cow. It is sacred because it is a Brahman's. All his property is equally inviolable. The wicked king's sin lay in robbing the priesthood, not in taking animal or specifically bovine life.

We can now summarize the attitude towards the cow at the close of the Vedic period. It was still an article of food, and was appreciated for that reason economically as well as for its other economic values. It had also a great deal of religious context, which had put around it an aura which it perhaps did not possess when the Aryans entered India with their herds. This aura started with the importance of the cow and its products as ritual offerings. All the economic and ritual merits of the cow had led

to an extensive figurative use of the animal in the Vedic hymns and the rest of Vedic literature, with reference to the cosmic Waters, the cosmic generality Aditi, and the all-productive and all-nourishing Earth. These had been called cows so often that they had come to be considered cows. At the same time the Brahmans were promoting with all the force they could command the idea that the Brahman's cow was inviolable. The Brahman's cow was in itself a symbol of all those honoured feminine figures to which the name cow had been applied in figurative language. But the figurative quality of such application was fading from sight. By the close of the Vedic period the older texts, especially the hymns of the four Saṃhitās, were becoming obscure and difficult to understand.[40] As the past dimmed, metaphor and epithet were taken as literal and the sacred figures were considered actually to be cows. In reversal, the cow was considered to be those figures. Coupled with this misunderstanding was an enhanced importance given to the idea of the inviolability of the Brahman's cow and the fearful penalties for killing it. The sanctions which applied to the Brahman's cow were ready at hand to be applied to cows in general.

At this juncture the doctrine of Ahiṃsā came to the Aryan community. The roots of this doctrine are obscure; they are certainly not to be found in the Veda, but where they are to be found is a problem still unsolved. It is, however, a justifiable inference, and an inference common among students of Indian thought, that Jainism and Buddhism popularized the doctrine. They gave it a sanction in associating it with another doctrine also becoming prominent at that time, of Karma and Rebirth. Violation of Ahiṃsā would have an effect upon the violator in a future existence. At the end of the Vedic period the doctrine of Ahiṃsā makes its first appearance in Hindu literature, as was pointed out above. But the doctrine of Ahiṃsā as the Jains and Buddhists preached it did not discriminate in its application in favour of the cow or cattle. It applied to the entire animal world. All animals were viewed alike; none was translated above the others and

40. Hence there arose those studies of lexicography, phonology, morphology, syntax, metre, which led the Hindus to develop linguistic science, discovered more than two millennia later by the West, to become the fountainhead of our modern linguistic studies. See M. B. Emeneau in *Journal of the American Oriental Society*, vol. 75, 1955, pp. 145-153.

venerated. An examination of the sermons incorporated in the canons of these two faiths will show this to be true on the level of authority. An examination of the copious supply of parables, legends, tales, novelle, traditions, which appear in the non-canonical literature, will also confirm it on the level of popular acceptance. The slaying of any kind of creature—goat, bird, whatever it may be—will be followed by just as severe retribution as the slaying of any other, such as a cow. In fact, a cow is very seldom the victim in their edifying exempla. And when Ahiṃsā is first mentioned in Hindu, or Brahmanical, texts (Chāndogya Upanishad, Bhagavad Gītā), there is no intimation of the content of the idea there, no suggestion that it applies to the cow more than to any other animal, or even that it applies to animals at all rather than merely to human beings.

The mere acceptance of the doctrine of Ahiṃsā does not in itself explain the origin of the sanctity of the cow in Hinduism. But the acceptance of that doctrine at a time when the Vedic attitude toward the cow had acquired the special characteristics which we have described seems to have played a decisive part in the belief that the cow was holy and should be held inviolable. Further, the doctrine of Ahiṃsā gave to the idea of the inviolability of the cow a kind of moral sanction hitherto lacking. Compassion toward living creatures touched the heart of Hindus, as well as of Jains and Buddhists, and became an ethical principle of great power. It expressed the need not merely for kindliness towards one's fellow man but towards all animal creation, with which Indians feel themselves to be fellows. When it was expressed towards the already exalted cow, it had the result of giving the cow a place at the top of all animal life, as is so frequently expressed in Hindu literature.[41]

41. For example, in Hitopadeśa story 1.2, where the aged, incapacitated, and hypocritical tiger explains to the gullible wayfarer whom he is planning to devour that he has turned ascetic to atone for his great sins, which he mentions in an obviously descending order of magnitude as the slaying of many cows, Brahmans, and human beings. Note, in particular, the long section in the Anuśāsana parvan of the Mahābhārata (13.69-83) dealing with the profit one gains from making gifts of kine to worthy recipients, that is, to Brahmans, and containing a great deal of information of many sorts concerning cows. The section includes the story of King Nṛga, who unknowingly got possession of a strayed cow belonging to a Brahman, and in

At some period, not ascertainable, the doctrine of the cow's sanctity, which grew up in the Aryan Brahmanic environment, became associated with the ancient pre-Aryan conception of the Great Mother or Earth Goddess. This has been known in India since the time of the Indus valley civilizations of the 3rd and 2nd millennia B.C. It is certainly one of the oldest cults of civilized India. Its ramifications in non-Aryan communities and in Aryan are widespread today. There is an obvious affinity between it and the Vedic conception of the cosmic Waters, Aditi, and the Earth as "mother" or "motherly". Though the pre-Aryan (or non-Aryan) and the Vedic notions never blended into a single well-integrated doctrine, they dovetailed well enough to produce the idea of the cow as our mother, and in recent times as the motherland India. The idea of the cow as Mother is one of the most fruitful elements in stimulating the sentimental treatment of the cow in Rajput painting as well as in mediaeval Hindu literature. In modern India the same attitude has been abundantly evident in Mahatma Gandhi's writings on the cow, which was to him a 'poem of pity."[42]

a moment of unfortunate generosity gave it to another Brahman in consequence of which he was reborn as a lizard living in a well. There is a cow heaven, which is a bucolic paradise beyond compare, where only the very righteous go. Kine are proclaimed the mothers of all creatures.... No one should kick at kine or proceed through the midst of kine. Kine are goddesses and homes of auspiciousness. For this reason they always deserve worship.... Kine, by yielding milk, rescue all the world from calamity.... One should not, even in one's mind, do an injury to a cow.... When giving away kine, the donor should enter the cowpen and say, "The cow is my mother; the bull is my sire. [Give me] Heaven and earthly prosperity. The cow is my refuge!"... One should never go to bed without reciting the names of kine. Nor should one rise in the morning without a similar recitation of the names of kine. Morning and evening one should bend one's head in reverence to kine. One should never feel any repugnance for the urine and the dung of the cow. One should never eat the flesh of kine. As the consequence of this, one is sure to attain great prosperity.... The cows yield the essential milk and ghī which constitute the offering (havis) of the sacrifice and hence the sacrifices rest on them.

The references to the cow's sanctity are literally inexhaustible. One other work in particular could be singled out, namely, the Bhāgavata Purāṇa.

42. For Gandhi's attitude toward the cow see the collection of scattered remarks and short essays by him published as a booklet with the title *How to Serve the Cow?* (Ahmedabad: Navajivan Publishing House, 1954).

THE SANCTITY OF THE COW

The stages by which the doctrine of the cow's sanctity spread throughout the Hindu community are not clearly discernible. It comes conspicuously into view during the period of Muslim invasion and conquest, when Hindus were shocked by the constantly recurring examples of cow-slaughter. To the Maratha chieftain, Shivaji (1627-1680), cow protection was a cardinal issue along with protection of Brahmans and the observance of caste rules and distinctions.[43] Sanctity of the cow has long been a dogma which a primitive tribe must accept on coming into Hinduism, though again we cannot say how long this has been the case.[44] Today in India the sanctity of the cow, is a subject of discussion, interpretation, agitation, political pressure, public hygiene, national economic development. But this aspect of the doctrine's history is not a subject for consideration in the present paper, however much change may come to that doctrine.[45]

43. See V. A. Smith, *The Oxford History of India,* 2nd edition, 1923, p. 431.

44. For an illustration, see Stephen Fuchs, *The Children of Hari,* 1951, p. 358.

45. Some interesting remarks on the sanctity of the cow, which at points approach some of the ideas in this paper, appear in Bankim Chandra Chatterjee, *Letters on Hinduism,* M. M. Bose, 1940, pp. 39-42.

V

BRITISH PSYCHOLOGY DURING THE PAST FIFTY YEARS

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Every British psychologist will welcome this opportunity of conveying to the University of Madras their congratulations on its centenary, and of wishing it all prosperity in the future. I myself am greatly honoured by the invitation to contribute a paper on this occasion. It has been suggested that I might attempt a brief retrospective survey of the more distinctive contributions made by psychologists in Britain to the progress of our common science, during the past fifty years.

Materialism and Idealism in Psychology

From the days of Locke, Hume, and Berkeley, who founded the British school of philosophy, and introduced "the new way of ideas", the study of the mind has tended to form at once the starting-point and the basis for most of our philosophical thinking. But the English, with a brave disregard for consistency, have a habit of trying to see all sides of a question at once. And thus, almost from the start, our psychology has tended to combine the idealist outlook bequeathed to us by Plato with the empiricist standpoint inherited from Aristotle. Locke had the practical attitude of an English doctor; Hume the sceptical disposition of the hard-headed Scot; Berkeley the spiritual background of an Irish bishop. British psychology weaves in a somewhat eclectic pattern the merits of all three. And no matter which point of view is for the time being in the ascendant, the general trend remains, and has always remained, intensely individualistic—as after all is only natural among those who inhabit a small island. Nor is it altogether fanciful to imagine that the mixed origin of our nation has favoured a mixed infusion in our philosophy—diluting the cold water of realism, which alone can slake the Anglo-Saxon's thirst

for knowledge, with the richer wine of mysticism, cherished by the Celt.

In 1687 Newton published his *Principia* and sent a copy to Locke. And for the next 150 years or so the impressive success of the Newtonian method in the physical sciences encouraged a mathematical and mechanistic approach to the problems of the mind. James Mill and his son John Stuart Mill did not hesitate to compare the Law of Association with the Law of Gravitation. And during the late nineteenth century the rapid advances in physiology and neurology culminated in the materialistic doctrines of Huxley and his contemporaries, who were inclined to treat psychology as a "science of cerebral reflexes"—a "psychology without a soul."

But, while in the laboratory men talked of the omnipotence of Matter, in the Universities they proclaimed the supremacy of Spirit. England during the Victorian era was quite as remarkable for its creative poets and artists as for its inventive scientists and technologists. Thus the idealistic metaphysics which dominated the Universities, particularly towards its close, did much to correct the one sided materialism of the non-philosophical scientist. At the same time, too, the idealist movement in this country was greatly strengthened by the increasing interest in the ancient traditions of the East which developed as a result of a growing acquaintance with the literature and philosophy of India. As one writer has declared, "there is much in later English writing which suggests a combination of ideas from the two geographical extremes of the great Indo-Aryan race."

By the beginning of the twentieth century the disintegration of the atom by Rutherford in Manchester, and the doctrine that matter and mass were not the permanent things that older physicists had assumed, began to render a purely materialistic psychology out-of-date in Great Britain, just at the time when, under the title of 'behaviourism', it was becoming popular on the continent and in the United States. At Cambridge itself, the home of these new physical researches, the interest in non-materialistic hypotheses was further enhanced by the increasing attention paid to the problems of spiritualism and psychical research, in which leading physicists like Oliver Lodge, Crookes, and J. J. Thomson took an active part. Nevertheless, *as a working*

procedure, it remained a recognized maxim that we should strive first of all to push the explanatory possibilities of known concepts to their utmost before invoking the unknown.

Psychology as a Branch of Biology

Meanwhile psychology itself was being rapidly transformed from a branch of philosophy into a department of natural science. In this country the change took place, not (as on the continent) through the efforts of men who had originally been trained as physicists or physiologists, like Fechner, Helmholtz and Wundt, but rather under the inspiration of men who were primarily biologists—notably the three great champions of evolution, Spencer, Darwin, and Huxley.[1] However, all three writers stood somewhat apart from the main trend of academic psychology, which both at Oxford and at Cambridge remained idealistic. As a result, the work of Spencer and his followers had, to begin with, a smaller influence on orthodox psychology in this country than it had abroad. Medical writers, on the other hand, and particularly neurologists like Maudsley and Hughlings Jackson, immediately accepted the Spencerian stand-point. Jackson, for example, borrowed and developed Spencer's highly original conception, which has since been so fruitful in later work on the physiology of the brain, namely, the notion that the central nervous system, and therefore the mind itself, is organized on a *hierarchical* plan.

Spencer interpreted life as essentially a process of adjustment and adaptation; and in conscious creatures the capacity which effected this adjustment he called 'intelligence'. Some of the most important chapters in his main work (*Principles of Psychology,* 1870, Pt. IV, ch. i, ii, & iii) are concerned with the nature, laws and development of intelligence. In France, Spencer's teaching was eagerly taken up by Taine (*De l'Intelligence,* 1870); and so paved the way for Binet's celebrated scale of mental tests.

Individual Psychology

Without a doubt by far the most original contribution made by the British evolutionary school is to be found in the researches of Sir Francis Galton, a cousin of Charles Darwin. Galton was the first to establish individual psychology on a scientific basis. The

1. Cf. G. Villa, *Psicologia Contemporanea* (Turin, 1899), cap. I.

interest in individual character, which is so prominent in British literature during the nineteenth century, was largely the product of the romantic movement, and in particular of the historical novels of Sir Walter Scott. Historians like Carlyle and Macaulay at once took up the theme: the limelight is on human actors rather than on the scene. And, as Galton himself relates, it was from the novelists and historians that he learnt the supreme importance of individual character in the drama of world affairs. His approach was essentially biological. Stimulated by Darwin's inquiries into the *Descent of Man,* he set to work to investigate the inheritance of mental characteristics along genuinely Darwinian lines. In place of casual observation and personal insight he resolved to substitute scientific methods and objective assessments. The essential prerequisites were "the development of rigorous procedures for measuring both the mental characteristics of the individual and the relations between them." These he supplied by inventing first the experimental device of 'standardized tests' and secondly the statistical device of 'correlation.' And these two techniques have dominated nearly all the more original work in British psychology during the earlier half of the present century.

General and Special Abilities

To begin with, Galton directed his attention chiefly to the study of physical characteristics. Height, weight, bodily shape, size of brain or rather of skull, could all be accurately measured: facial expression could be photographed. Yet it soon became clear that the correlations between mental and physical characteristics were too low to be of diagnostic value. As a result it became an accepted maxim in all such studies that "we should judge mental characteristics by mental symptoms rather than by physical."

Galton therefore went on to devise laboratory tests for measuring various types of mental capacity—sensory acuity, free association (a procedure which later played so important a part in the work of the psycho-analysts), questionnaires for mental imagery, and finally various tests for assessing what he described as 'higher mental processes.' Most of them are described in a book of his which can still be read with profit, *Inquiries into Human Faculty* (1883). And one of his conclusions has had a prolonged and dominative influence on the course of later

research: from his various studies of heredity he became convinced, in sharp opposition to the phrenologists, that special faculties or aptitudes were of far less importance than what he termed 'general ability' and what later writers, adopting Spencer's word, called 'intelligence.'

The Biometric Study of Heredity

Being a man of independent means, Galton held no academic post, and established his own biometric laboratory. Its primary object was research; but he also offered advice to teachers or parents in regard to children who caused trouble or difficulty either at home or in school. Each child became the subject of a scientific examination, based partly on mental tests; and in this way furnished material for Galton's psychological inquiries. His laboratory was thus the first child guidance centre. The work received enthusiastic support from James Sully (Professor of the Philosophy of Mind at University College, London, and head of the new Department of Education); and through his mediation Galton in 1905 was able to set up a Eugenics Department at University College itself.

Here his most active disciple was Karl Pearson, a brilliant mathematician. And the laboratory at once became the centre of what was known as the "biometric school'—a small group of ardent enthusiasts all firmly convinced that the proper approach to the study of inheritance, both physical and mental, was through statistical analysis. About the same time William McDougall, then a young man fresh from Cambridge, was appointed Director of the Psychological Laboratory—the first in the country—which Sully himself had instituted for the purpose of training students; and a year or two later was invited to combine this with a part-time appointment at Oxford where he opened a similar laboratory.

McDougall was an enthusiastic supporter of Galton's views and methods. As a result, during the first ten years of the century a series of researches on mental tests was carried out under his guidance by a number of younger psychologists—Charles Spearman (who had received his experimental training under Wundt in Leipzig), Jack Flugel (who later became one of the leading supporters of psychoanalysis in the country), and William Brown and myself (who were attendants at Karl Pearson's lectures in London).

The Psychological Study of the Child

The work of Galton, McDougall, and their various followers aroused widespread interest among teachers and education officials; and in 1913 the Education Department of the London County Council decided to appoint its own official psychologist. This was the first appointment of this kind throughout the world. The psychologist's primary duties were to examine individual pupils—dull, backward, delinquent, or neurotic children—and embody the resulting recommendations in case-reports. At the same time the Committee freely encouraged psychological investigations, both by teachers and by outside students in the schools under its charge and even financed the publication of scientific books replete with expensive tables and diagrams. When I was fortunate enough to be offered the post, I had the voluntary help of numerous research students who were working under Spearman, Brown, and Nunn in the various colleges of the University. Some were teachers of experience; others were senior students from home and abroad—many of the ablest coming from India.

Factor Analysis

The first task of a school psychologist was that of classification. Without it, diagnosis, treatment, and the study of causes could scarcely begin. But the classification of individuals implies a classification of mental characteristics. There were many rival theories already in existence; and some kind of objective technique was needed to decide between them. With this aim in view the correlational procedures developed by Galton and Pearson for studying physical characteristics were taken over and adapted for psychological problems. In 1902 Pearson himself had put forward a method of statistical analysis based on 'principal components.' The immediate object was to devise a system for classifying and identifying criminals instead of the celebrated Bertillon scheme, which had proved disappointing.[2] In modifying Pearson's procedure for the purposes of psychological classification, I ventured

2. W. R. Macdonell, 'On Criminal Anthropometry and the Identification of Criminals' (with a note by Karl Pearson). *Biometrika*, I 1902, pp. 177-207. The work was based on a correlational study of measurements for 3,000 criminals obtained at Scotland Yard by the Bertillon method. However, after Galton had successfully elaborated the finger-print method (first applied in India) he and his fellow-workers pursued the matter no further.

to introduce a simplified formula based on 'simple summation' instead of 'weighted.' This allowed the investigator to reduce a large number of correlated variables to a small number of uncorrelated components or 'factors.'

Intellectual Abilities

The most urgent problems at that time arose out of the classification of dull and mentally defective pupils. We therefore began with a study of intellectual abilities. The outcome was a strong confirmation of Galton's twofold theory of (i) a 'general factor' of intelligence and (ii) a number of more specialized abilities now more often described as 'group factors.' Each of these factors was in turn subdivisible; and the whole formed a hierarchical scheme of classification similar to that suggested by Spencer, and fully in keeping with the hierarchical theory of nervous functions developed by Jackson and Sherrington.

It was natural for the academic critic to inquire whether both types of ability were necessary. Spearman, influenced by the current teaching of Ward and Sully on the unity of the mind, doubted the existence of special abilities, and held that, so far as innate characteristics were concerned, all individual differences could be interpreted in terms of a single general factor.[3] On the other hand, Thorndike in America, and Brown and Thomson in England, denied the existence of the general factor, and recognized only a miscellaneous and unsystematic set of special abilities. The controversy between the two extremists did much to stimulate research; and eventually both sides came gradually to accept most of the arguments of their opponents.

The experimental work of Sherrington and Lashley on the central nervous system, and the microscopic studies of the brains of defectives, gave a neurological basis for the doctrine of general ability. 'Intelligence', it appeared, was merely a manifestation of the general structural quality of the individual's nervous system as a whole. Innumerable converging lines of evidence—neurological, biological, sociological, studies of twins and foster-children, the analysis of pedigrees and detailed case-histories—all tended to show that individual differences in this structural quality were

3. Spearman's views underwent considerable modification. His most influential work was undoubtedly his book on *The Abilities of Man* (1927).

inherited or at least innate. At the same time, the doctrine of cortical localization in its revised form lent support to the hypothesis of specialized abilities.

Psychogenetics

About the same time, an equally heated controversy arose over the nature of mental inheritance. Galton had put forward a 'particulate hypothesis of heredity'; but for long it remained merely an interesting speculation. However, at the beginning of the century, the re-discovery of Mendel's work led to the foundation of a rival school of genetics at Cambridge under Bateson. And for more than fifteen years a violent dispute arose between Pearson as champion of the biometric school and Bateson as protagonist of the new science of genetics over the nature of hereditary traits. Mendelian traits were avowedly qualitative and discontinuous variables; yet most human traits seemed to be quantitative and continuous. Mendel himself however, had incidentally suggested a theory which would overcome the difficulty—namely, the idea of multifactor inheritance. Nevertheless, it was for some reason overlooked even by the most ardent mendelians. At length about 1910-1915 it was amply verified in the case of plants, and, later still, of animals; and in 1918 Sir Ronald Fisher not only showed how it could be generalized to cover graded characteristics such as height or weight in man, but also worked out a statistical procedure for testing its accuracy in the case of other characteristics. This effected a reconciliation between the two schools, and so inaugurated a new branch of study—'biometrical genetics'.[4]

'Intelligence' is simply a convenient one-word term, adopted by Galton, Binet, and their various followers to designate what is more precisely defined as 'the innate general factor underlying intellectual efficiency.' It is of course not the only factor, but probably the most important. How then is it inherited? There is now ample evidence to show that, like differences in stature, differences in intelligence (as thus defined) are the effect of *multifactor inheritance*—that is, of a large number of genes whose effects are small, similar, and cumulative. To the psychologist the

4. R. A. Fisher, "The Correlation between Relatives on the Supposition of Mendelian Inheritance', *Proc. Roy. Soc. Edin.*, LII, 1918, 399-433. 'The Causes of Human Variability', *Eugenics Rev.*, X, 213-220.

special interest of this Mendelian hypothesis arises from the explanation it offers for the genetic origin of the *disparities* between members of the same family as well as of their *resemblances.* And since lack of intelligence is responsible for so much social inefficiency, educational and cultural backwardness, and crime, it is of the utmost importance to improve our available methods for distinguishing those cases which are innate and therefore irremediable from those which can be corrected or improved if taken in time.

Emotional Characteristics

During the first world war the numerous cases of psychoneurotic breakdown and the increase in delinquency attracted increased attention to the emotional aspects of personality; and the rival theories of Freud, Jung, and Adler revealed the need for some more objective method of confirming or confuting their somewhat sensational speculations. McDougall's early work on the emotions and instincts, and the discussions they excited, had already prompted the application of factorial methods to these puzzling characteristics. In the Oxford laboratory we began by searching for reliable tests. To begin with we tried the various instrumental methods used for recording the outward effects of emotion—changes in respiration, circulation, temperature, unconscious movement, and the like. Of these the most promising was the newly discovered psychogalvanic reflex. Still more effective, as it turned out, were the newer devices based on the inward effects of emotion, particularly its influence on association, apperception, and personal preference,—peculiarities that were readily revealed by the various ink-blot and picture-tests, used by Binet in his earlier studies and later elaborated by Rorschach, Murray, and others.[5]

Here I can only briefly touch on some of the most general results.[6] The correlational analyses disclosed a clear distinction between 'cognitive' or intellectual processes and emotional or 'dynamic.' On the emotional side we discovered strong evidence for a hierarchical organization similar to that found on the noetic

5. C. Burt, 'The General and Specific Factors underlying the Primary Emotions', *Brit. Assoc. Adv. Science,* LXXXIV, 1915, 694f.

6. Cf. M. L. Reymert (ed.). *Feelings and Emotions,* 1950, pp. 531-551.

or intellectual. There is first a broad factor of general emotionality, secondly more specialized 'group factors' for temperamental types, and finally a number of highly specific tendencies. The last correspond very closely with what McDougall had called 'primary emotions' (each usually related to an instinct). The second—the 'group factors'—classified these 'primary emotions' into 'sthenic' and 'asthenic' groups, with a cross-classification for the pleasurable and unpleasurable emotions. The whole was suggestive of Wundt's tridimensional theory of feeling. And the outcome was a certain amount of objective support for a modified version of the traditional fourfold classification that goes back to Galton. We find in fact a double antithesis between extraverted *versus* introverted, and euphoric *versus* dysphoric 'types'—the 'types' being really a matter of degree, not of sharply opposed classes.

These more academic studies threw considerable light on one of the most urgent of the practical problems that the psychologist is called upon to face—that of delinquency and crime; and much the same methods of statistical analysis were used to check or modify the earlier theories of causation and the newer proposals in regard to treatment. A beginning was made at Oxford under McDougall, who held that most juvenile offences were the effect of instinctive impulses. London provided a magnificent opportunity for an extensive collection of systematic case-histories; and the conclusions reached were later shown to hold good in most of the larger urban areas in this country.[7] At the same time it became clear that different types of social background might greatly alter the phenomena: so that conclusions reached in one particular area or in one particular country must not be applied to others without direct confirmation.

Physical Characteristics

The ancient theory of temperaments had assumed a close association between emotional tendencies and body-type; and the new doctrine of hormones, curiously reminiscent of the Hippocratic doctrine of humours, seemed to furnish an intelligible basis for the traditional view. Galton's anthropometric methods provided a working scheme for obtaining exact bodily measurements. Our own investigations on children and adults quickly confirmed

7. C. Burt, *The Young Delinquent*, 1925.

the alleged distinction between the leptomorphic (microsplanchnic) type—tall, spare, and lean—and the pachymorphic (megalosplanchnic) type—short, broad, and stout.[8] The correlations with temperamental characteristics proved to be both positive and statistically significant, but far too small to be of diagnostic value.

Later Applications

After considerable hesitation the methods of British factor analysis were taken up in America by Kelley, Holzinger, Thurstone, and their followers. Kelley had worked with Karl Pearson; and he and Hotelling developed a procedure which is in all essential points identical with Pearson's method of principal components.[9] Holzinger had worked with Spearman; and Spearman's method, as we have seen, was an attempt to supersede Pearson's multifactorial procedure by a simpler analysis based on a single general factor only. Thurstone, on the other hand, starting with Spearman's procedure, broadened it once again to admit of 'multiple factors'; and, quite independently it would seem, hit on what I had called the 'formula for simple summation', which he in turn re-named the 'centroid formula'. Most American investigators still remained highly sceptical of the existence of any general factor; but Thurstone's later doctrine of 'second order factors' in some measure reconciles the two points of view. The results of the numerous investigations carried out by Thurstone, Guilford, Cattell, and their various collaborators have since greatly extended our knowledge of "the factors of the mind."[10]

In Britain the methods and results of these studies in individual psychology proved of increasing service not only in educational and

8. Cf. C. Burt, 'The Mental Differences between Individuals', *Brit. Assoc. Adv. Science* (Presidential Address, Psychol. Sect., 1923). Kretschmer's well known work on *Physique and Character* (1925) tended in the same direction. His statistical proofs, however, were severely criticized, and even the alleged distinction between body-types was widely questioned. However, the anthropometric classification was fully confirmed by a later analysis of measurements obtained from 2,400 volunteers for the Air Force during the second world war (C. Banks and C. Burt, 'A Factor Analysis of Body Measurements', *Ann. Eugenics*, XIII, 1947, pp. 238-256).

9. T. L. Kelley, *Essential Traits of Mental Life*, 1935.

10. L. L. Thurstone, *Vectors of Mind*, 1935; *Multiple Factor Analysis*, 1947.

clinical psychology, but also in vocational and industrial psychology. Almost immediately after the first world war, C. S. Myers, for long head of the Psychological Laboratory at Cambridge, founded in London a National Institute of Industrial Psychology. Here numerous investigations were carried out with mental tests, rating scales, questionnaires, and the like; and the outcome was a practicable procedure based on sound scientific principles for allocating individuals to the occupations for which they were most suited. It was largely from this Institute and from the ranks of teachers trained in psychological techniques that the departments of Personnel Selection were built up during the second world war for the various fighting services. Since then similar methods have been introduced in the selection of candidates for the Civil Service and for numerous industrial firms.

Conclusion

The upshot of this half-century research has been an increasing understanding of the structure of the mind, or, as I should rather say, of the *structure of personality*. In its general framework that structure appears to be essentially *hierarchical*.[11] On both the cognitive (or cybernetic) aspect and the orectic (or dynamic) aspect there seems to be a *general* factor, subdividing into broad *group* factors, each being further subdivisible into *specific* factors, and so on almost *ad libitum*. From a theoretical standpoint the main interest lies, not in the abstract scheme, but in the concrete details, many of which have been independently confirmed by studies in neurology and comparative psychology. From a practical standpoint the results have proved of the utmost value in many different fields. They provide a convenient working schedule of key-qualities or traits for the study of individual personality. They show that from a knowledge of three or four 'general factors'—general physique, general ability, general emotionality, and, with older children and adults, general morality and the temperamental type to which each belongs—we can at once make a number of helpful predictions. And the whole series of investigations supplies us with a scientific basis for individual

11. Cf. C. Burt, 'The Structure of the Mind: A Review of the Results of Factor Analysis', *Brit. J. Educ. Psychol.*, XIX, 1949, 100-111, 176-194. P. E. Vernon, *The Structure of Human Abilities*, 1950.

psychology, which is itself an indispensable foundation for education, sociology, psychiatry, industrial psychology, economics, and political science.

A word of caution is necessary. There has been a growing tendency, particularly overseas, to treat statistical psychology as an autonomous branch. In our view the statistical procedures provide a method of verification rather than of discovery. They must not be separated from other modes of psychological inquiry—observational, introspective, experimental, physiological, and clinical. They cannot supersede, but only supplement them. As is obvious from the history of psychoanalysis and social psychology, it is easy enough to invent novel and even sensational theories; but to determine their truth and their validity statistical techniques are essential. Thus the psychology of the future must be based on team work—experimental, neurological, and statistical specialists all co-operating toward the same common end.

PROGRESS OF UNIVERSITIES IN YUGOSLAVIA

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The Post-war development of universities in Yugoslavia has been very rapid. The need for highly-qualified cadres of all vocations, the improved material conditions regarding studies for the children of the working people, created through the care of the state authorities, the building of new university centres as the result of the achieved national equality and care for the raising of the national cadres, necessitated such a development.

This development finds itself reflected primarily in the growth of the number of universities and faculties, teachers and students. Before the war there were three universities in Yugoslavia—in Beograd, Zagreb and Lkubljana. After the Liberation, another two were opened one in Sjoplje and another in Sarajevo. But the development of high-school education manifested itself even more through an increased number of faculties and students. In old Yugoslavia, in all the three universities, there were 27 faculties (inclusive of the independent high schools and art academies) which in 1938-39 had an enrollment of 17,475 students. Today, the five universities include 70 faculties, having last year an enrollment of 57,072 students. Before the war, Yugoslavia had one student to each 808 inhabitants, whereas today this ratio stands as one student to each 296 inhabitants, indicating that the number of university students has grown over three-fold.

This increase in the number of students has been rendered possible by the state through the introduction of free instruction, the granting of scholarships and other benefits to enable the children of toilers to take up university studies. Here are just a few data on the subject. In the school year of 1950-51, in all the universities, there were 28,872 students receiving scholarships, or 52·4% of the total students. Following the amendment of the system of

scholarships and the introduction of the children's allowance, the number of scholars decreased considerably. But if the children's allowance for students is regarded as a form of assistance for studies, then we have the following picture in the last school year: 19,106 students are receiving the children's allowance, 6,291 students are receiving scholarships granted them, primarily, by the state, and, to a lesser extent, by enterprises, co-operatives and social organizations. Therefore practically every second student is receiving either a scholarship or the children's allowance. The contrast that constitutes in comparison with the condition in the old Yugoslavia can best be gauged from the following: in the school year of 1938-39, in all the universities in Yugoslavia, there had been 603 scholarships, one-fourth of whom had been sponsored by the state and the rest by different charities.

The state has made education easier also through the erection of students' hostels and the opening of students' messes. In Yugoslavia, something over 10,000 students are accommodated in 28 hostels, while about 16,000 students take their meals in 28 messes. In addition, the state is spending considerable resources towards the health protection of students. All students with scholarships get free medical treatment in the health institutions for students as well as in other hospitals and sanatoria. The students who receive no stipendium and are of poor means are similarly entitled to free medical treatment, while all the others enjoy 50% reduction in all the health institutions. In addition to this the students whose parents are socially insured are entitled to free medical treatment, too. However, there is but a small number of students without free health protection.

A contribution to the improvement of the material status of students also came from the People's Youth organization, which, for a long time after the Liberation, looked after the students' hostels, rest centers and holiday centers. Although, in 1949, this service passed under the competency of the appropriate state organs, many tasks of the health protection and economic security are nevertheless the responsibility of the Federation of Students.

All these made it possible for those who in the old Yugoslavia could not come to the university due to poverty to have university education, and this has not only increased the number of students but has changed their social composition as well. For example,

today, in all the universities, the number of workmen's children is seven times that of pre-war. However, today the percentage of workmen's children to that of employees' is low, yet the above datum bears witness to the fact that the children of workmen too are reaching the university, which had been rarer before the war.

The changed social status of woman in Yugoslavia finds itself reflected in the composition of the students in the universities. Before the war, there had been five times more male students than female ones, and today there are only twice as many. Besides, today women are also taking up the study of those vocations for which they very rarely matriculated before the war—veterinary science, agriculture, engineering.

Parallel with the growth of the number of students, there was an increase in the number of teachers, full and part-time, at the universities. In the school year of 1938-39, in all the faculties there were 272 full-time, 120 part-time professors and 153 docents and lecturers, which compares with 398 full-time, 469 part-time professors and 624 docents and lecturers in the school year of 1952-53. The number of part-time teachers grew from 219 before the war to 701 today. Likewise there has been a considerable increase in the number of assistants and other faculty associates.

From the Liberation to date, the people's authorities have committed huge resources for the development of universities. The investments alone (building projects and equipment) have claimed the sum of 15.000 million dinars, at today's prices. In addition, each year, besides stipends and other outlays, about 1,500 million dinars are spent towards the regular financing of the universities. But even so the material basis of the universities still falls short of the requirements.

The primary task of the university is to train highly-qualified cadres for all fields of the social activity. In the period from 1945 through 1952, the number of students who were graduated from all the faculties amounted to 20,291, including 195 in 1945; 942 in 1946; 1,336 in 1947; 1,578 in 1948; 2,633 in 1949; 3,443 in 1950; 4,569 in 1951; 5,593 in 1952.

From the above data it follows that Yugoslavia recorded a certain progress in the field of higher education, that the number

of Yugoslav citizens who are enabled to study at the university has been considerably increased, that the material status of students has greatly improved over pre-war, that an increasing number of graduated students keeps joining the practice annually. All this is beyond any dispute, but it should not denote that Yugoslavia can be content with the condition at the universities. There are still many unsolved questions, affecting both instruction and the students themselves, and most of all Yugoslav social community, which is providing considerable resources without receiving in return that which it could receive and which it rightfully expects from higher schools.

VII

NEW LAW ON UNIVERSITIES IN YUGOSLAVIA

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In old Yugoslavia universities had represented self-governing scientific-educational institutions with a determinate autonomy whose bases lay not in the prescriptions and will of the ruling class, reactionary in its role and trends, but in the strength of the progressive student movement and the ideal and moral firmness of a good portion of the most prominent teachers. This real, factual force upon which the university autonomy had maintained itself had been supported by the enlightened public opinion and the democratically disposed majority of the Yugoslav citizens, being so whenever the autonomy of the university was brought into jeopardy on the part of the reactionary elements. This became a frequent phenomenon, especially after the abrogation of the Constitution of 1921 and the gradual fascization of the internal political life of the country.

After the Liberation of Yugoslavia the universities continued to operate as self-governing institutions, enjoying the scientific and educational autonomy which was no longer disputed but constantly strengthened instead. The profound social and political changes which were effected in Yugoslavia in 1950, in particular, have had to embrace, inevitably so, a redefining of the status of the university and faculties, of their tasks and the method of their management.

With that view, a draft law on universities began to be prepared in 1952, with the active participation of all the Yugoslav universities. The teachers' associations of all the universities, rectorates, faculty councils, and even individual teachers and assistants, all of them had not only publicly considered and publicly criticised, at their forums or through the Press, the individual principles and solutions in the initial drafts as prepared by

the Federal Executive Council of the People's Assembly, but had, until the last moment, whilst the proposed law was being examined by the competent committees of the Federal People's Assembly, advanced their observations, suggested new and different solutions and contributed to the perfecting of the legal text. In this way the universities had not solely accepted the urgency of the enactment of both the law and its considerably new and bold principles, especially in connection with the system of management, but also had actively co-operated in the preparation and drafting of this law.

By their traditions, the Yugoslav universities are democratic institutions. Generally, since their inception, they had fought for the freedom of scientific thought and the freedom of teaching at the faculties. A considerable number of the best students and an appreciable number of teachers sacrificed their lives during the Second World War fighting not only against the invaders and fascism but for the rise of an independent, free and progressive state community of the Yugoslav peoples the noble status of free educational institutions. Hence the universities are always sensitive to reforms designed to reinforce their independence and improve the conditions for their unhindered and superior scientific and pedagogic work. The enactment of this new law on universities is inspired by such tendencies.

The structure of the teaching cadre and student body has been subject to constant democratizing from the Liberation to date. The criterion pertaining to the selection of teachers has been democratized and objectified so that capable scientific workers are invited to discharge the important and responsible teachers' function who, in the process, regard neither science nor teaching work as a privilege of their own or of determinate social strata. Admission to the university is not barred by any system of fees or taxes. From the Liberation to date the number of students from the ranks of workmen and peasants has been rising constantly, the same as from the ranks of the intelligentsia and other social strata. Accordingly, the universities have become a component of that social order which in Yugoslavia is being built on the bases and principles of socialist democracy.

The new law itself is not the expression of some abstract principles, nor does it seek to realize a reform for reform's sake. It

observes the university traditions and international standards, and it does not exceed the general level in the material and every other development of Yugoslav universities and the whole social community. In that respect, its most characteristic provisions occur in Article 4 and 2, Paragraph 2, which emphasize two fundamental principles regarding the status of the university and science in Yugoslavia. The first principle is: "The freedom of the teaching and scientific work at the university shall be guaranteed" (Article 4). The second principle stresses, despite the introduction of social management, and specially as its derivation and for its sake, that "the questions of the performance of teaching and scientific work shall be within the exclusive jurisdiction of the teaching-scientific collectives" (Article 2, Paragraph 2). The university or the faculty still continues to be represented by the rector or dean, who exercise the function of their principal administrators.

In Yugoslavia, as in a series of other countries, there exists the simultaneous need for a considerable independence of the faculties and for their academic integration within the frame-work of the university. Hence the law defines the university as a community of faculties, and the faculties as the scientific and supreme institutions for determinate professions or groups of professions. The university is not a hierarchically superior body in relation to the faculties, and it is not entitled to interfere in their autonomous rights. As a community of faculties, the university looks after "the promotion and co-ordination of teaching and scientific work" and it discharges solely those tasks which the law designates in virtue of their possessing the character of common tasks for all the faculties. The law stresses the role of assistants, considering them as the co-workers of the teachers in the performance of teaching, and it provides for the engagement of scientific and professional associates for work in the institutes and other scientific-teaching centres within the framework of the university.

However, the law also contains considerable innovations which vest it with the character of a reformatory act in the history of the university in Yugoslavia. The most essential innovation refers to the new system of management at the faculties and universities. In the Yugoslav social sciences and legislation this system receives a new name: *Social Management.* In effect, social management

possesses several meanings. In the broader sense, by social management is understood the system of organs, institutions and organizations in which the self-government of the working people is realized not only in the sphere of policy and state authority but in that of the economy, education, culture, science and other social services as well. Thus, this concept would embrace: the representative organs of government authority which are subject to direct election and recall by the people (the people's assemblies and the people's committees), the workers' councils and managing boards which exercise direct management in economic enterprises, the meetings of electors, the councils and commissions of citizens in the people's committees, the participation of citizens in judicature and in administrative bodies, as well as the participation of working collectives and citizens in the administration of the self-governing or independent institutions, i.e., institutions which are already being separated from the state administration. However, social management also has its narrower sense, and it is thus that it is being employed to indicate the essential aspect of the reform of the Yugoslav universities. Social management, then, denotes such a system of management of an institution whereby is secured the participation in the organs of administration also to those citizens who are not directly engaged in the work of that institution. It is in that sense that this concept is employed with reference to social management in the field of education, science and culture.

Leaving aside the so-called private and free universities, which are free from the state but not so from the sponsor or financier, who makes their subsistence possible, the largest number of universities in the world, together with those in Yugoslavia, had, until this reform, existed and operated mainly as self-governing institutions. Self-government at the university stands for a certain relative independence and democratization. Yet it always remains but an administrative self-government, and universities are solely the administrative institutions of the system of state authority. They are part of the state educational administration and are subordinate to the regulations of the classical, state administrative law. In such a case, the state keeps the university in an enforced or suffered administrative wedlock, replacing the Church in that role. From this administrative link there arises the ideological and even political subjection of the university to the state administration, since the latter makes the stronger partner of the two.

Social management serves to dissolve this historical administrative wedlock and to radically separate the university from the state administration. The educational administration of the state no longer has any administrative or other rights towards the university. This is the first positive aspect of social management which not only vests the university with greater freedom and initiative in matters of management but brings greater freedom to scientific thought and teaching work.

All the self-governing institutions, especially the closed associate and scientific teaching institutions, into which the self-governing universities are inevitably turning or tending to turn, possess certain, as it were, organic deficiencies and weaknesses. However, at all events, administrative self-government in scientific institutions is doubly pregnant with danger. It encourages and enables the scientific institution to seal itself off, to become a new guild. As is known, feudal manifestations are not unknown to societies from which feudalism had been eradicated from the economic and social relationships. In closed bodies there arises cliquism, familiarity, dynastic relationships, internity, opportunism and self-complacency. These manifestations have been brilliantly appraised not only by sociologists but by great novelists too. Many an intellectual, hurt in his dignity of scientist and free individual, has been made to feel them in trying, "without social connections, without crouching," to win himself admission to such institutions and academies, purely on the basis of his own ability and sense of personal dignity, and of the rights that a capable and free man should command. That is the second danger deriving from a docile, serene and sealed-off administrative self-government of individual scientific and educational institutions.

Social management aims at warding off such dangers, at preventing certain tendencies from turning into a peril to genuine self-government and the execution of the responsible tasks of the university and faculties. It achieves this through not delivering the management of universities to the teaching staff alone but to the teaching staff and the other representatives of the learned and professional public, whom it jointly regards as the proxies of the community. The teachers, the representatives of the university associates and citizens from outside the university participate in management not on the basis of a special status and the privileges

deriving therefrom but on the basis of a new democratic social mandate.

As can be seen, social management does not represent the introduction of the some extraneous controllers who should oversee the work of the university and faculties. Indeed, the citizens outside the university are the component part of a unified associate body which manages the university and faculty no less than the university teachers themselves. They are all equal and have the same duties and the same type of responsibility which issue from a new democratic right bred by socialistic democracy: the right of social management. The teaching staff is an integer and the university only stands to gain, and can lose nothing, by this new system of management. In the system of social management the hierarchical right is no more, and all decisions are rendered by its organs and within its framework. But now this deciding is not independent and final within the university only. It has been considerably democratized. All the basic aspects of deciding belong to the associate bodies, the university and faculty council and the university and faculty administration. The decisions are rendered democratically, by way of discussion, exchange of experiences, matching of opinions, and, if need be, they are reached by decision of the majority.

All this, in brief, explains why the great majority of members of the Yugoslav universities have adopted the new law as a progressive and democratic act. This law not only makes a contribution to the strengthening of the role and independence of the university but it serves to develop that process of the socialist democratic transformations in Yugoslavia in the full realization of which the universities, faculties and the creative free scientific thought and pedagogic activity can find only new conditions and new material and spiritual support. By this token, the law on universities transcends the bounds of a mere juridical act on universities and represents an instrument for the broadening of the basis and institutions of socialist democracy in Yugoslavia.

THE TIRUTTONṬATTOKAI OF ĀRŪRAR (COMMONLY KNOWN AS SUNDARAR)

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I

The Tiruttonṭattokai is one of the hymns of the 7th Tirumurai, or Ārūrar's Tēvāram. A new element has been introduced in this Tiruttonṭattokai hymn, that of communion with the loving souls hankering after God. These are called 'Tonṭars', that is, those in the service of God. This conception of Tonṭar is considered by the Śaivites as an important spiritual message of Ārūrar.

The idea of reverential feeling towards the Tonṭars is nothing new. Periyālvar talks of the 'Tonṭakkulam' in his Tiruppallāṇṭu, thereby abolishing all castes and creating a family of all those who worship the Lord, to whatever caste or community they may belong. Ārūrar also refers to this great community in a verse of his. The love for God reaches its highest point, only when it becomes the love of the Bhaktas or Tonṭars, even to the neglect of God. The phrase 'Tonṭaraṭippoṭi' in the Nālāyirap prabandham is very significant, the dust on the feet of the Bhaktas; this is purer than the water of the Ganges—that is the conviction of Kulaśēkharālvār. Our saint Ārūrar goes a step further.

He creates a democracy of Bhaktas, a democracy for all times and climes. Though this is universal in its core, he has made it to appear as a Tamilian democracy at the first sight. Man as he is, constituted cannot grasp the full significance of the universal spirit. He is a speaking animal and it is this speech that creates his communal life. Our poet coming to sing in Tamil, has naturally to appeal to the Tamilian at first. Therefore, he groups together the saints of Tamil land and they represent the first vision of this spiritual democracy. The individual saints mentioned in his Tirut-

tontattokai are all, saints born within the sacred precincts of the Tamil country. This is not narrow parochialism; for we soon find our poet hastening to make this democracy universal for all lands, for all times. He has only utilized the national awakening of the Tamil country of his times to serve the Religious cause. Even in his Age, Tamil land was not one political unit. The Pāṇḍyas, the Cōlas, the Cēras and the Pallavas have made the Tamilakam their battle ground and our poet perhaps was himself a partisan of the Pallavas. He wants to escape from this scene of hatred and disunity, to a world of love and union. Fortunately, the Tamil language and its culture, offered one way of escape into this world of love. The common man understood this uniform culture of the Tamil land. This democracy of Bhaktas emphasizes that way of the common man. The spirit of renunciation and the feeling of divine, are possible for the poorest of the poor to whatever caste or community they may belong. Kings also come within this group of Bhaktas not as kings but as Bhaktas great for their spirit of self-surrender and self sacrifice. These great Bhaktas live for their great ideal laying down their very lives if necessary.

II

According to Periyapurāṇam, this Tiruttoṇṭattokai was sung after the marriage with Paravai. This composition was due to the position taken by Viraṉmiṇṭar who concluded that even the Lord, that favoured one who did not honour the Bhaktas, was to be blamed. Ārūrar was praying to God that he should be given the necessary capacity for singing the greatness of the Bhaktas and He answered his prayer by suggesting to him the first half of the first line of this hymn. In a few editions of Periyapurāṇam, some additional verses are found in this connection where it is stated that Ārūrar, coming from the house of Paravai in his libertine form, went straight to worship the Lord, whereupon Viraṉmiṇṭar condemned Ārūrar, who was therefore overcome by grief and who could not find the Lord inside the temple, whereupon, the Lord advised him to sing this hymn. The Sanskrit and Kannada traditions, refer to this libertine form and the Telugu Basava Purāṇa by Somanatha refers to this incident in these very terms. This trend in such descriptions is found in some mediaeval pseudo Siddha works which in exaggerating the intrinsic purity of jīvanmuktas assert that they as svēccācārins may be appearing for all

outward purposes as libertines—almost suggesting that they may be consciously so. In their enthusiasm for reform and revolt these assertions are made which may suggest that they are heretics—not bound by ordinary laws of conduct reminding us of the western antinoumenon doctrine and practices where harletry and other carnal vices are not considered sinful for the spiritual man because the spirit in him which is God is not affected by the flesh and cannot sin and because the man, who is nothing, cannot sin so long as the spirit, which is God, is in him. This cannot be the correct view. But as most of the editions of Periyapurāṇam do not contain these seventeen verses, they must be taken to be interpolations based on the Telugu and Kannada traditions. Ārūrar teaches us that there is a God who transcends nature, that Dharma governs all men, that there is sin and that the acts of libertines are impurities leading to Hell, for, there is suffering and enjoyment, not only in this life, but also in our after life. When the jīvanmukta transcends ordinary morality, he reaches the stage of perfect goodness which is beyond our conceptions of good and evil; it is supra moral and not immoral.

III

But this is not the problem facing us. We find that the saints who ought to be taken as contemporaries of Ārūrar came to be known to Ārūrar only after this hymn was sung. Kōṭpuli, Kaḻaṟiṟṟaṟivār and Ēyarkōṉ may be mentioned in this connection. Especially with reference to Ēyarkōṉ, the miraculous events took place long after this Tiruttoṇṭattokai hymn was sung. It may be contended that it is not the miracles but their greatness in the Śaivite world that appealed to Ārūrar and that these saints were famous even at the time of the marriage with Paravai.

IV

Another problem arises on account of the statements made in Periyapurāṇam. While Ārūrar was coming to Tiruvārūr temple, he saw all the followers of Śiva of this world assembled within the grove—Tēvāciriyaṉ. "When is the Lord to make me their slave?"—so prayed Ārūrar, and the Lord explained to him the greatness of these saints and asked him to take refuge in them. He saw the great assembly at a distance and worshipped them many a time and began singing the Tiruttoṇṭattokai repeating the

name of every one of these saints. This description in Periya-purāṇam suggests that all the saints mentioned in Tiruttoṇṭattokai were physically present on the occasion of its composition. This will make all of them contemporaries.

But it would be impossible for the 3,000 Brahmins of Tillai to have assembled there along with the other saints. It may be suggested that a few of their representatives were present in the grove-Tēvāciriyaṉ. In addition to this, Caṇḍēśvara and Kōccenkaṇāṉ have become traditions by the time of this hymn. It may be contended in answer to this argument that there was a confusion in the mind of the people, a confusion which led to the identification of a later Caṇḍēśvara and Kōccenkaṇāṉ with their namesakes of a more ancient period. Even if there was any such confusion, it could have been only because these two saints were not contemporaries of the three Tēvāram poets.

Whether all these saints were contemporaries or not, one conclusion is clear that Nampiyāṇṭār and Cēkkiḻār, if not Ārūrar looked upon them as forming one group. In the 'Appālum aṭiccārntār purāṇam' Cēkkiḻār distinguishes this group of saints from all other groups living before or after this group. If all of them are not contemporaries they must be taken to have lived in one particular period, probably the 6th and 7th centuries of the Christian Era responsible for the restoration of Śaivism to its old glory. This conclusion seems to be irresistible as these saints lived in the memories of the people of Ārūrar's age.

V

In this connection, the traditions about the Jain Saṅgha, the Buddhist Saṅgha and the great Tamil Saṅgha come to our mind. The name Tiruttoṇṭattokai is also very suggestive. 'Tokai' has been used by Campantar himself as the name of Tamil Caṅkam. Then, Tiruttoṇṭattokai will mean this Śaiva Saṅgha or the assembly of Śaiva followers or saints. Perhaps one such assembly existed at Tiruvārūr.

The name of Tēvāciriyaṉ for the grove or the maṇṭapa of saints is also significant. Tēvāciriyaṉ means divine teacher; a fitting name for the place where these teachers of Śaivism assembled from generation to generation up to the time of Ārūrar. Probably Viraṉmiṇṭar was the latest of the leaders of this assembly.

Or, Tēvāciriyan may mean the Ācāryas or teachers who had attained divinity as jīvanmuktas or vidēhamuktas. In any case, it is clear from the reference in Periyapurāṇam that this group forms a unique one, separated from others as belonging to a particular period of time and particular place. This line of argument may lead one to conclude that all these saints could not have been removed from each other by any great length of time, perhaps more than a century.

VI

It is in this connection the fact that all these saints belong to Tamil country becomes important. The Pallava period was a great age of Sanskrit revival in the Tamil country. But that is only one half of the story. The saints like Ārūrar have been successfully attempting at Tamilizing the people, the kings, and their tradition. The great transformation effected by Ārūrar in his treatment of Purāṇic stories is significant. The kings themselves trying to identify themselves with the Tamils by assuming Tamil titles and assimilating the Tamil tradition with their history may be seen in his hymns. It is in this light that we have to study Ārūrar's poems.

VII

A study of Tiruttoṇṭattokai hymn is very interesting. The hymn begins with the Brahmin saints of Cidambaram, who, along with the Nāṭarāja temple there, should have become so prominent as to occupy the first place during the age of Ārūrar. The next name mentioned is the saint from a community of potters. This juxtaposition of a potter with the Brahmins shows that the poet is going beyond caste-ridden society to give us a vision of the universal brother-hood—the Toṇṭakkulam of Periyāḻvār. The list of Toṇṭars in this hymn will show the caste-war distribution of the saints. Every one of the innumerable castes of South India could feel honoured by their contribution of at least a saint to the growth of this brotherhood.

VIII

This fact of these saints of Tiruttoṇṭattokai being Tamilians has not been sufficiently emphasized till now. Tiruttoṇṭattokai was sung in the temples and we have specific reference to an

inscription of Rājēndra Cōḻa. Nampiyāṇṭār Nampi has sung a separate verse for each one of these Bhaktas and Cēkkiḻār's Periyapurāṇam gives the stories of these Toṇṭars with all epic grandeur. His Purāṇam, therefore, has become in a way the national epic of the Tamil Land. The incidents themselves are of no immense significance. It is the spirit that actuated Bhaktas that is really divine. Therefore, these stories have a psychological significance tracing the spiritual development of these Bhaktas. From an examination of the places of birth of these Bhaktas, we will find that all of them belong to the Tamil land.

IX

But there are two saints who may appear to be an exception to the generalization that all the saints of the hymn are from the Tamil land. The one is Tirumūlar. The later day tradition states that he came from the Northern country. Ārūrar is silent about this. But even according to the later day tradition the saint entered the body of a Tamilian cowherd and therefore he is no exception to our generalization.

The other saint is Nēca Nāyaṉār. But we will be finding 'Kampili' as the birth place of Nēca Nāyaṉār. This city lies on the bank of Tuṅgabhadra. This, therefore, gives us a clue to the conception of Tamil land of 'Smṛtis' time. The Smṛtis speak of Kṛṣṇa as the Southern boundary of the Andhras and, therefore, there is no wonder in Nampi Ārūrar thinking of all the lands south of Tuṅgabhadra forming part of the Tamil country and the attempts of the Pallavas and the later Cōḻas were aimed at reaching that northern border. It is unfortunate that when discussing the limit of the Tamil country this aspect of the question is often forgotten. The Pallavas had their northern capital at Danyakaṭaka and Kulōttuṅga, the Great, came from the Vēṅgi country. Therefore, in their times, it was but natural, that the Tamil country should have been thought as reaching Tuṅgabhadra, if not Kṛṣṇa. Kampili is not given as the city of Nēca Nāyaṉār by Ārūrar himself. The city, however, as an important holy place as containing a Śiva temple is mentioned by Appar.

X

It is significant that in this list of Toṇṭars, Nampi Ārūrar does not mention Mārkkaṇṭar, Paracurāmar, Cūtar, Pārtha,

Bhagīratha, whom in other places he had mentioned with the feeling of great reverence. In the light of our statement about the birth place of Bhaktas included in Tiruttoṇṭattokai the reason for the non-inclusion is very clear.

In some of the hymns, our poet-saint refers to some of the saints found in Tiruttoṇṭattokai along with Mārkkaṇṭar, Cūtar, Paracurāmar, Pārtha, Bhagīratha etc. Therefore, Nampi Ārūrar has no objection to combine these sets of saints. Only the scheme of Tiruttoṇṭattokai as giving a list of saints of Tamil land prevents Nampi Ārūrar in including the names of these saints whom he had confessed had inspired him to take refuge in the Lord.

IX

Ārūrar feels that the Tamil country is dear to Śiva. The later day poets had emphasized this greatness of Tamil land by associating with Naṭarāja and Dakṣiṇāmūrti who are always turning to the south, that is according to them, to the southern part of the Tamil country. Ārūrar is very definite about Śiva favouring the Tamil or the south country: "Teṉṉāṉaik kuṭapāliṉ vaṭapāliṉ kuṇapāl cērāta cintaiyāṉ"—'He is the Lord of the south and his mind never turns to the west or the north or the east'. Our poet feels that Śiva is behind the Tamilians and their rulers. "Niṟaikoṇṭa cintaiyāl Neṭuvēli veṉṟa Niṉṟacīr Neṭumāṟaṉ" refers to the victory of the Pāṇḍya because Ārūrar probably feels that it was a victory brought out by Śiva's blessing on the king a victory for the Tamilians as against the foreigners who threatened the freedom of the Tamil country. It is in this light we have to understand Ārūrar's reference to the Pallavas: "Pallavarkkut tiṟai koṭā maṉṉavarai maṟukkam ceyyum ...... Perumāṉ" and his joy in referring Kaḻaṟciṅkaṉ as "Kaṭal cūḻnta ulakelām kākkiṉṟa perumāṉ". Perhaps we have to interpret with reference to various chieftains and kings in his Tiruttoṇṭattokai as so many references to the great men who saved the Tamil country of Śaivism. "Kūṭā maṉṉaraik kūṭṭattu veṉṟa Kōṭpuli" and such other references are significant from this point of view. It is, therefore, no wonder that he has grouped together the Śaivite saints of the Tamil land fresh in the memory of his age as something unique in his Tiruttoṇṭattokai. It is in this light that we must read the blissful references to the various places, rivers and mountains of

Tamil land occurring in his hymn, descriptions which probably showed the way to the later day poets singing Nāṭṭuppaṭalam, Nakarappaṭalam and Āṟṟuppaṭalam. Therefore, his descriptions of nature of Tamil land is important from this point of view apart from its supreme poetic worth. Ārūrar's conception of Tamil as the very form of God has to be discussed in relation to the theory of Mantra and Poetry and generally of Art, as the later day generations have considered these songs as the Tamil Vēdas and the verses as Tamil mantras.

The suggestive descriptions of some of the saints given by our poet deserve our attention. He calls 'Iyaṟpakai' as one who never says, 'No'—"Illaiyē eṉṉāta Iyaṟpakai". 'Meypporuḷ Nāyaṉār' is described as one who is an adept in the path of success—"Vellumā mikavalla Meypporuḷ". This description gives the inward view and significance of the life message of this saint. Meypporuḷ Nāyaṉār breathed his last at the hands of a traitor who came in the form of an Āgamic scholar. This saint pleaded with his servant, Tattaṉ, inspite of the deceit to save the honoured form thus glorifying his own reverence for the sacred book through his own death. The victory is the victory of the ideal. Again, 'Taṇṭi,' is described by our poet as one full of eyesight—"Nāṭṭamiku Taṇṭi", though according to the tradition he was blind. Our poet must be emphasizing the inner light and the ideal which guided Taṇṭi. Similarly Kaṇṇappar, the illiterate hunter saint, is described by our poet as the hero of all arts—"Kalai malinta cīr Nampi Kaṇṇappar". The hunter saint was as it were the fruition of all arts, the divine love, and it is this, our poet must have had in his mind. In describing "Amarnīti", our poet refers to his garland of 'mullai' or jasmine—"Alli meṉ mullaiyantār Amarnīti". Usually it is a symbol of chastity. Probably our poet wants to emphasize that kind of relationship between Amarnīti and the Lord.

The poet describes some of the saints by the honoured title of Nampi perhaps looking upon them as divine princes. Some of them, Appūti and Naminanti are Brahmins and they might deserve the title of Nampi; so do the heroes and ministers, Kulacciṟai, Iṭaṅkaḻi, Muṉaiyaṭuvār and Kōṭpuli. But there are also others, who are not Brahmins. Therefore, our poet could not have had the castes in his mind when he described them as Nampis. Kaṇṇappar is

called by him as "Kalaimalinta cīr Nampi" and he is accepted by all as the prince among the Bhaktas. Kaṇampullar is one Nampi and his caste is not known. Eṟi pattar is another Nampi. Kulacciraiyār, the minister of the Pāṇḍya was responsible for bringing Ñanacampantar to Maturai for restoring Śaivism and he is, therefore, called 'Peru Nampi'. Appūti who exemplified the path of service, following the foot steps of Appar is called 'Oru Nampi'—'The Unique One'. Naminanti is called 'Aṟunampi', the rare one.

In some places our poet gives more than a passing reference to the glorious deeds of these saints such as 'Vellumā mika valla Meypporuḷ', but usually our poet devotes one half of a line in describing each one of the saints. He devotes more than half a line to Kaṇampullar. For such saints as Tirunāvukkaracar, Cākkiyar he devotes almost a full line. He devotes a line and a half to Caṇṭīcar and Campantar. But to Murukaṉ and some others he devotes only a quarter line.

He describes Ñanacampantar as our Lord (Empirāṉ) who pays no regard except to the feet of God adorned with the beautiful and sweet smelling Koṉṟai. Tirumūlar is also described as Nampirāṉ, our Lord. He speaks of Tirunāvukkaracar as one who had the straight path of Grace as his ideal path. Neṭumāṟan is said to have conquered the battle of Nelvēli because of the power of his mind so full of concentration on the Lord's feet. Kaḷaṟciṅkan is referred to as the son of Kāṭavarkōṉ and the Lord of the world surrounded by the seas. The verb used is 'kākkiṉṟa' which is in the present tense suggesting that he is the contemporary of Ārūrar. The description implies that the Pallava king was the Lord of the seas.

Some of the names themselves are suggestive of the greatness of the saint: Viṟaṉmiṇṭar, Eṟipattar, Kaṇṇappar, Meypporuḷ, Iyaṟpakai, Māṟaṉ, Tirunāḷaippōvār, Tirukkuṟipputtoṇṭar, Cākkiyar, Kaḷaṟiṟṟaṟivār, Śakti and Kaṇampullar.

Atiyars are the life of the Bhakti cult. From this point of view Śaivism becomes a religion of service. It is this philosophy which has really worked the miracle, making Śaivism popular in South India. It is from this point of view the Tiruttoṇṭattokai hymn is considered to be more precious than others.

The munificence of the patrons of Śaivism strengthened this philosophy of service and gave political importance to Śaivism.

Some of these patrons are said to have amassed the wealth in whatever way they liked either in gambling or in war for offering their services to the Śaivite Aṭiyars. It is this philosophy of love and service that had made Śaivism popular and powerful. Great Vēdic scholars and ritualists, great Āgamic scholars, learned men and poets, great kings, great chieftains, along with fishermen, untouchables, potters, washermen and hunters became followers of this religion making it a cosmopolitan one and instances for these groups we find in this great hymn Tiruttoṇṭattokai which glorifies the philosophy of love and service.

NORTH-SOUTH POLARIZATION
A STUDY IN THE TYPICALITY OF ATTITUDES

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1. *Purpose*:

The *theoretical purpose* of this study is an analysis of attitudes of "Northerners" to "Southerners" and *vice versa*. Such mutual attitudes have been found typically repeated in various countries and act there as powerful cultural determinants. The main concern of this study is primarily the typicality of such North-South attitudes, occurring in otherwise quite different environmental situations, and in the second place the question whether, or how far, they are based on real or imaginary differences between northern and southern populations or their environments in any one of the areas concerned.

It is *not* proposed to analyse in this connection the existence of political differences or tensions between separate countries, even though they may be situated north and south, east and west, or north-west and south-east of one another.[1]

A *practical purpose* of the present paper is to create interest in, and enlist co-operation for, the study of North-South attitudes in countries other than those discussed here,—particularly of the southern hemisphere. There the possibility of a reversal of the phenomena, observed in the northern hemisphere, may be envi-

1. In a discussion of the problem before us, attitudes of the British towards India at the time of British rule there and that of Indians towards England in the same period, have been mentioned as conforming to the pattern of North-South differences, even though that antithesis has generally been referred to under the terms of "East and West", as in Kipling's often quoted lines,—instead of more correctly as a difference between northwest and southeast. However, the present analysis concentrates its interest on mutual and typically repeated attitudes between Northerners and Southerners of one and the same country or area.

saged. This will be shown in para six of the present study: "The Magnetic Pole—an explanation?"

2. *The Scope*:

The scope of this study may at first appear to be of a culture-geographical, rather, than of a genuinely anthropological nature for its object is the imagined or real North-South segmentation of countries and is generally viewed in terms of climatological influence. Close comparison of various dichotomously divided geographical units, however, suggests culture-generated components—apart from the climatological origin of the North-South division under discussion.

For this reason it is here proposed to deal with the subject from the anthropologist's rather, than the geographer's point of view, just as in the study of a raven—and falcon—moiety, for instance, the anthropologist's approach would appear more fruitful than the ornithologist's, though his knowledge may also add to the understanding of the complex phenomenon.

The differences of northern and southern culture types which is seen through the eyes of typical mutual attitudes, appear to be in part real (Müller, 1892: 95-96) but may be in part, at least, imaginary. But whether actually existing or imaginary, they do determine cultural relations between Northerners and Southerners in a number of countries and areas and thus form commonly accepted value judgments of "The North" and "The South" (Guyot, 1875: 185, 195-7). Such values shape the thoughts and actions of Northerners and Southerners towards one another and are characteristically repeated wherever an area is, in the minds of its inhabitants, sub-divided into, or seen as, one northern and another southern subregion. The repetition and typicality of these mutually opposing attitudes of North and South and *vice versa* is therefore of major concern for the proposed study:—apart from the possible foundation of these attitudes in actually existing and environmentally explainable local differences. An attitude such as for instance, the Nazi stress on *Aufnordung*,—*i.e.*, the improvement of Germany through northernization (by means of increasing her northern elements), may be quoted as an instance here;—not because it proves the possibility or desirability of such an *Aufnordung* but because it proves the existence of differences in North-South attitudes. They were present in Germany be-

fore and continued after the period of Nazism, though they were and are not so one-sidedly formulated, as in the Nazi concept of the North's complete superiority.

However, there are other and quite objective expressions of popular opinion available from other countries too, which refer to North-South differences. Of these only the U.S.A., China and India may here be represented in the words of leading authors or politicians who were at the time of writing their works neither geographers nor historians,—much less anthropologists. Their opinions may therefore be safely taken as representative of popularly accepted values,—free from theoretical inhibitions or preconceived constructs. They are repeated as illustrations of attitudes here; not as proofs for alleged facts.

John Gunther's "Inside the U.S.A." devotes a full chapter to the detailed description of what he calls "The South: Problem Child of the Nation" (1946: 653-678). This chapter, though based on Odum's carefully composed statistics and other factual material, yet gives also Gunther's own personal impressions such as the "lazy drawling accents", the "Magnolia Myth", as well as the spirited temperament of the South (1946: 656) in a long list of significant differences of culture which are on the whole not very flattering to the South, but which end with a significant appraisal of its unsurpassed charm (1946: 675).

Lin Yutang, another representative observer of our time, also devotes one chapter to "North and South" in his book on China: "My country and my people" (1936: 15-21), from which only a brief passage may be quoted here: ".....when we try to put a southern commander over northern soldiers....we are abruptly reminded of the existing differences" which he characterizes as "hard living, tall and stalwart, hale, hearty and humorous" for the North and as "inured to ease and culture and sophistication, mentally developed but physically retrograde, loving their poetry and their comforts, sleek, undergrown men and slim neurasthenic women....shrewd in business, gifted in belles-letters and cowardly in war, ready to....cry for mamma" (1936: 17-18).

Reference to North-South differences again is made in his "Discovery of India", by Jawaharlal Nehru, the Prime Minister, when he says: "The South thus became a centre of the old artistic traditions while the North was more affected by new currents

which the invaders brought with them. This process was accelerated in later centuries and the South became the stronghold of Hindu orthodoxy (1946: 110)." These speculative, observations but also literature in the field of qualified fiction, such as for instance "Gone with the Wind" in America or their equivalents in many other countries add an almost inexhaustible array of material to the complexity of mutual North-South attitudes.

3. *The Problem*:

The consideration of actually existing—not only theoretically stated differences between the North and the South as an anthropological-cultural, rather, than a merely geographico-physical phenomenon, developed in the course of a comparative study of matrilineal societies in India. Cultural-anthropological North-South differences, however, are not confined to the peoples of India but find close parallels in a wide range of others, such as for instance the Americans (Odum, 1936: 11; Parkins: 1938: VIII), or the "Germans, French, Spanish, Russians, Italians, Arabs and other peoples" (Ward, 1918: 281). Although scientific attempts at the explanation of factual differences between North and South in the U.S.A. are concerned with a great number of local factors (Myrdal: 1944: 44; 1466, 1476 index) which may be contributive agents in this particular set of circumstances,—these same historical and local geographical factors are not present, or consistently valid in all other regions where yet a similar North-South position of mutual attitudes prevail. This position consists in a tension between the two mutually dependent culture-regions of North and South within a given culture area. It will hence be called *North-South polarization.* This polarization is neither confined to the U.S.A. nor to India where factual but different causes for the phenomenon can be adduced. It operates also in other areas of different geographical and "culturological" determination, but yet produces similar mutual attitudes between Northerners and Southerners. This repeated occurrence can therefore hardly be explained in terms of local conditions only. The problem before us then, is the question whether we are here faced with a *supra-*, cultural phenomenon and—if so, —of what kind?. In other words, are similar North-South attitudes among peoples in dissimilar environments due to diffusion or an innate common principle—a kind of *Elementargedankan*—and if so, of what nature is this common principle?

4. *Aspects of Polarization.*

Let us now consider the different forms in which this polarization is manifest and can be observed.

The study of matrilineal groups in India showed at first that a numerically stronger group of matrilineal societies lives in the South of the sub-continent, if compared to the North (Ehrenfels, 1941: 43, 36; 1953/c).

The second observation of significance to our problem was the concentration of such culture features in the South which, though not constituting matriliny as such, are yet linked to a "maternal" type of social organization, (Ehrenfels, 1956/b.) in other words, to a culture in which traits of feminity are not looked down upon and where women's rôles and functions are not entirely dependent on their relations to husbands or sons, but have a grounding in their own (female) values. Some such features, marking differences between the South and the North of India are puberty rites for girls (Ehrenfels: 1941: 15, 42, etc.), the legal and ritual importance of the maternal uncle (Ehrenfels: 1941: 15, 40, 77, etc.), the prevalence of cross-cousin marriage (Karve 1953: 188, *seq;* 192, etc.). The tension between the mother- and daughter-in-law, is, on the other hand, an outstanding feature of patriliny, especially in the Indian field. It is rare in matrilineal societies of South India; because there cross-cousin-marriage is allowed and institutionalized. In the cross-cousin form of marriage there obtains a close and generally friendly relationship between mother-, and daughter-in-law, because in a cross-cousin marriage these two stand in the relationship of aunt and niece to one another.

The generally accepted interpretation for this Indian North-South distribution of paternal and maternal features presupposes the intrusion, of Aryan languages speaking peoples coming from the North as invaders of the Indian subcontinent. (Nehru: 1946: 110).

But another distributional factor, seems at first to militate against this interpretation. This is the existence of matrilineal groups in the extreme North-East of India (Gurdon, 1914, Playfair, 1909) and their decidedly maternal attitude of, and towards, women (Ehrenfels, 1950: 31, 1953/a: 408/9, 1955: 313). We have to consider this situation before we can further proceed discussing the main topic. I had myself envisaged, as a working hypothesis, the inner connection between the Southern and North-

Eastern matrilineal regions in India (Ehrenfels, 1941: 187), inspite of the fact that the two North-Eastern groups speak Austro-Asiatic and Tibeto-Burmese languages respectively; whilst the languages of South India are Dravidian and those of the North predominantly Sanskrit-derived Aryan prakrits.

This distribution of linguistic groups, alongside with the Garo belief that they had adopted matriliny from the Khasis (Ehrenfels, 1955: 318), and the Khasi belief that they migrated comparatively recently from beyond the Kopili river into Central Assam (Gurdon, 1914: 64, 180), suggests the exclusion of those two groups as culture-historical outsiders from the considerations of Indian North-South polarization. In the genuinely Indian peninsular regions and the Indo-Gangetic plains, however, a sequence of differences in character traits are generally felt to exist between the peoples of the North and the South. "The South is a region, not apart from but different from other sections of our country. It requires no array of figures and a long dissertation to prove this assertion. The press, literature, history and people in general recognize differentiations in our country." These words which Parkins wrote with reference to the U.S.A. (1938: VIII), have validity also for India. A number of character-traits are being ascribed by both groups to themselves and by each one to the other. Below these character traits are tentatively listed,—irrespective of whether they are real or imaginary, just as they appear even to a casual observer, without, however being verified by gallop polls or by statistic methods.

I. Character traits *attributed to themselves* by the people of:

The North:	*The South:*
1. Emphasized superiority, (generally)—and also superiority in	1. Less emphasized superiority, (generally),—and also superiority in
2. character,	2. eloquence,
3. in power and economic status,	3. in art and social renfinement,
4. in martial prowess,	4. in political dexterity,
5. in organizing capacity and	5. in patient endurance and
6. in industriousness.	6. in intellectual mobility.
7. Hard working,	7. Clever,
8. Reliable	8. Obliging.
9. Manly.	9. Graceful.
10. Serious.	10. Amiable.
11. Economic.	11. Generous.

II. Character-traits, attributed:

(a) to the North *by the South*:	(b) to the South *by the North*:
1. Superiority in power,	1. Inferiority in power,[2]
2. in martial prowess, and	2. in martial prowess, and
3. in hard work.	3. in hard work.
4. Energetic	4. Lazy.
5. Strong.	5. Weak.
6. Slow and heavy.	6. Quick and fast.
7. Rough and dirty.	7. Amiable and oily.
8. Egocentric and stingy.	8. Unreliable and wasteful.
9. Pessimistic and hard-hearted.	9. Optimistic and light-hearted.
10. Serious.	10. Crafty.
11. Intellectually inferior.	11. Clever.
12. Fanatic.	12. Spineless.

That a differentiation between "North" and "South" in the sense of this polarization exists in many countries, which are not mutually interdependent, is testified by so innumerable documents of folk-lore, literature and publicly discussed political opinions that it is sufficient to quote only one more early statement of this fact, made by a scientific observer.

R. De Courcy Ward, wrote already in 1908 under the heading of *Differences between Northerners and Southerners* that there existed broad differences of character distinguishing, ... between Northerners and Southerners, and that "the former...are more serious, more industrious more enterprising, and act after more mature deliberation, than the latter who, reflecting their brighter skies, are more impulsive, more genial, more generous, but also less energetic and more easy-going..." (1918: 280). To this general list,

2. In contradiction to this is the acknowledgement of outstanding qualifications as individual soldiers and the martial spirit, even fighting mentality of the American South, to which John Gunther's eloquent description of North-South differences draws attention (1946: 660). This finds a parallel elsewhere, for instance in martial classes of Malabar, or in the fact that the stalwart, martial North of Great Britain has actually been conquered by the clever, refined South or that Austria dominated for centuries much of northern Germany without, however, destroying the reputation of the North as manly and strong. Apart from the possibility that these instances may be the exceptions rather, than the rule, it should also be pointed out here that martial spirit and martial prowess in an average of wars are not necessarily identical.

the following items of differences have been added by a profound scholar of the American South, when he characterized that region as super-abundant in resources, deficient in skills and technology, wasteful in general economy with richness but immaturity in general culture, showing trends of "hesitance and relative retrogression in many aspects of culture" (Odum, 1936; 15), whilst Betrand Russell goes so far as to attribute the qualities of violence, graft and aesthetic refinement to the Southerners of Italy (1946: 104) and to think that the concept of hell was a typical product of the South, for it would have been a place, imagined as full of ice,—had it been first fathomed in a country as cold as Norway (Russell, 1946: 102).

The existence of North-South polarization as such as it is here indicated, requires hardly any further documentation at this stage nor does it seem controversial. The reasons for the phenomenon, however, cannot be so easily determined. To appraise this difficulty, let us now briefly review the main theories, so far feasible.

5. *The climatic explanation of the Phenomenon:*

The most obvious and most widely held view on this subject is the explanation of our phenomenon in terms of climatic influences. The few authorities quoted so far in the attempt to prove the generally held acceptance of deep-seated differences between "Northerners and Southerners" indeed incorporated the belief in the climatically conditioned origin of these differences into their mere observation. The harder and heavier climates of the North are held responsible for the Northerners' prominence in seriousness, industry, enterprise and mature observation, whilst the sunny, blue skies of the South are credited with the more cheerful, emotional, impulsive, genial or generous, but less energetic and rather easy-going temperament of the Southerners (Ward, 1918: 280).

The assumption of such a direct linkage between climate, culture or temperament, however, would make us expect a steady increase of the "southern" culture- (or character-) traits in a people, the further south it is situated geographically, and a corresponding, equally increasing number of "northern" traits, among proportionally more northerly stationed nations.

But the facts of North-South polarization show a basically different picture. Proceeding gradually from either Northern U.S.A.,

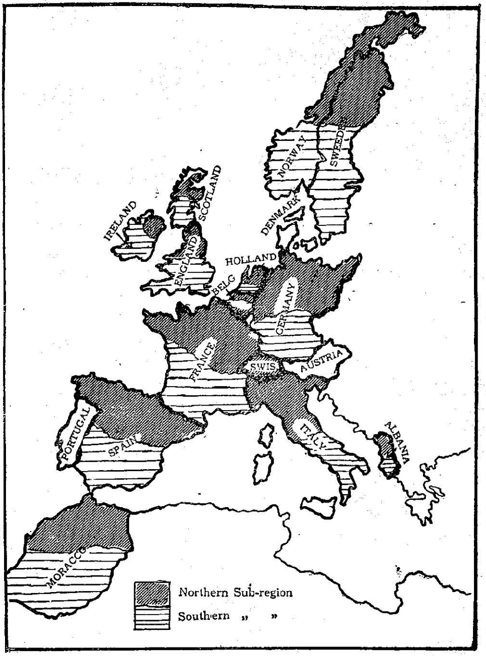

FIG. 1. North-South Polarized Area-units between the 10th meredian west and the 25th east from Greenwich.

North-Ireland, North Scandinavia or "Great" (northern) Russia through various regions towards the equatorial belt, we pass through a number of national, regional or other area-units,—each subdivided into two sub-regions;—one, "northern", the other "southern" in character. Thus the Southern Irish or Southern British are actually north of the Northern French, the Southern French and Southern Germans, Austrians and Swiss north of the Northern Spaniards, and Italians, and the South Italians or South Spaniards are north of the Northern Arabs, much as the Southern Arabs and the Southern Chinese or South Russians are north of the North Indians. Yet all these "Southerners" show actually southern polarized character-traits, in comparison to the "Northerners", living in warmer neighbouring countries, situated in the South.

The theory of a direct connection between climate and national characters fails to explain the splitting up of each single national or regional unit into a northern and a complimentary southern part and thus does not account for the oft repeated situation that a typically "southern polarized" group actually lives north, and in a considerably cooler, harder climate, than does the "northern polarized" group of their neighbours to the south, as in the case of South-Chinese (and Persians), living in the north of the North-Indians, or the Southern French (and Germans), living in the north of the North-Italians (and Spanish), whose southern groups, again live north of North Arabia and so on. This splitting-up constitutes the most outstanding geographical feature of North-South polarization (see charts fig. 1 & 2).

6. *The Magnetic Pole—an explanation?*

The picture of North-South differences, at least in the northern hemisphere, though contradicting the theory of a direct linkage between climatic conditioning and culture, corresponds to the formation of each one northern and another southern pole in a sequence of magnetized steel needles, placed consecutively on a line, running from North to South. The direction towards North or South respectively, of each needle's extreme end—not their actual proximity to the poles—is here the determinant of polarization. Our picture of culturally "polarized" small units, each situated in a northerly, or southerly direction of its two neighbours, corresponds to this type of magnetism, rather, than to a climatically

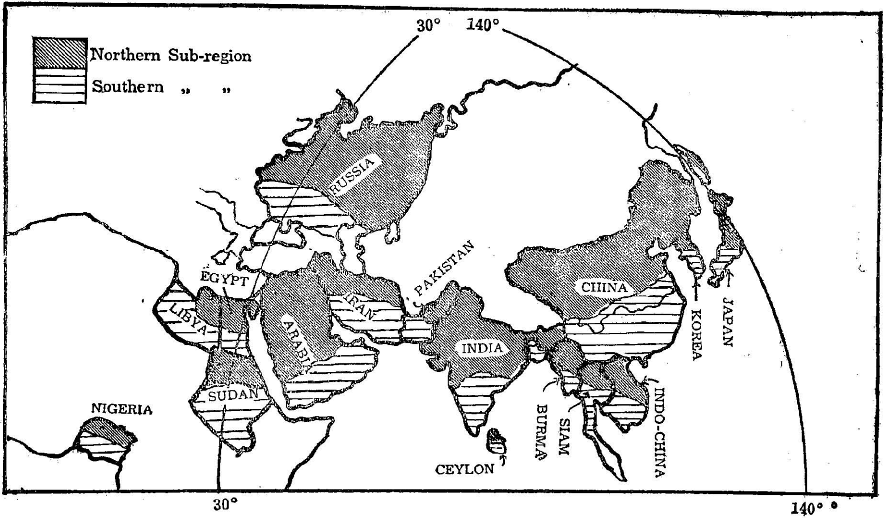

FIG. 2. North-South Polarized Big Area-units in Asia and Africa, north of the Equator.

conditioned situation. However, this way of interpreting our phenomenon would postulate a climatically reversed picture of culture figuration in the southern hemisphere. There the "Northerners" would be found in the warmer, more luxuriant climes and the "Southerners" in the rough and hard regions, exposed to the icy polar winds. It is true that the cultural North-South polarization seems less stressed on the Southern hemisphere than it is on the northern. Yet conditions in aboriginal South America (the rough Patagonians in the cold South and the Inca civilization in the warm North), perhaps in modern Argentina, Chile and Brazil (?) as well as in Australia and especially in modern Africa south of the Equator, would suggest a trend towards climatically, rather, than magnetically conditioned polarization. The "northerly" types of our terminology actually live in the cold South and what on the northern hemisphere would be styled as a "southern" culture seems more conspicuous in the warmer North of the southern hemisphere.

7. *The rôle, played by mountains and plains.*

Similarly inconsistent with the facts of cultural North-South polarization is the coincidence of mountains and plains. The northern regions in some of the cultural units under review, like Britain, Scandinavia, Spain and Greece are more mountainous in the North; others, like India, Egypt, South Africa, the German speaking—as well as the Tartaro-Iranean areas and, to a lesser degrees, also Italy, are predominantly hilly in the South, whilst in the U.S.A., China, S. E. Asia, Arabia, Russia, France, Ireland and South America the distribution of hills and plains is rather east-westerly than north-southerly oriented and even a completely mountainous country like Switzerland shows some signs of North-South polarization.

In view of this distributional picture no consistent inter-connection between hilly regions and plains with cultural North-South polarization appears to be traceable.

8. *Diffusion centres of expanding Cultures and Religions*:

Far more consistent with the situation, as we can so far see it, is the linkage between the northern regions and the diffusion centres of conquering, aggressive political systems,—at least in the Old World part—of the northern hemisphere (Asia, Europe, North Africa).

The northern regions of China, India, Arabia, Egypt, Iran, Greece, and also of the U.S.A. have indeed been more exposed to the attacks of martial peoples than their southern counterparts. The same situation, however, can hardly be claimed for the histories of Spain, France, England, Russia or Japan where foreign invasions came either from the West, the East or in fact from the South, as in the case of Spain, *vis-a-vis* the Arabs, of Celtic France and Britain *vis-a-vis* the Romans and England *vis-a-vis* William the Conqueror in 1066.

Foreign invasion into South Africa also came from the South, but there the South is actually the cold region and therefore conforms to the reversed South-North polarization of the southern hemisphere.

Invasions and conquests, though they undoubtedly did play a rôle in stressing differences between the North and the South of many countries,—yet would not yield an acceptable explanation for the typical North-South distribution of cultural character traits and mutual attitudes of Northerners and Southerners towards one another. This becomes particularly clear where, as in Italy, Spain, France and Britain invaders from the South, such as Greeks, Arabs, Romans and Normans, respectively, accentuated the southern character of their respective newly adopted homes instead of bringing the "northern" atmosphere of their northerly-polarized home-regions with them, as could have been expected.

A similarly inconsistent picture (—seen from the North-South polarization point of view—) is that of religious distribution. Typically North-South polarized areas such as the German speaking and the Irish ones, as well as the religious map of Switzerland and Holland suggest an equation of Protestantism with the North and of Catholicism with the South. But the U.S.A., have an emphatically protestant zone in their characteristically polarized South-east and more of Catholicism in the North. Catholics are also predominant in Northern Albania, against her Muslim central zone and the Greek-orthodox South. Islam would appear as an example of "northern" influence in India and in Africa, but as a "southern" element in Central Asia, Siberia, Russia, China, the Balkans, Spain, Italy and France. Buddhism and Jainism spread in India from North to South, but the former diffused in the opposite direction in China, Tibet and Mongolia.

In view of these observations North-South polarization would appear to work quite independently of, and disconnected with, religious and other cultural movements and the types of temperament carried with them, though religious feelings certainly yield a field for the expression of polarization sentiments. But in such cases the same religion may appear typically "northern" in one region, and "southern" in another.

9. *Racial Differences*:

The ethnic configuration of every North-South polarized region shows without exception differences in the distribution of racial elements. It would therefore at first sight appear convincing to try an explanation of the polarization phenomenon in terms of ethnic differences. However, the origin and nature of these racial differences between northern and southern regions of various countries are so little homogenous and the North-South polarization phenomenon as such is on principles so similar in all these different countries that an equation of the two phenomena as such seems hardly possible.

Immigration of conquerors or of groups from far distant lands is responsible for regional ethnic differences in Spain, Italy, France, Great Britain, peninsular Arabia and the U.S.A. The survival of ethnic elements in parts of countries which have been culturally annexed by an expanding state accounts for racial differences in the South of China, of India, of Egypt and of Switzerland as well as in parts of Germany and early Roman Italy. Two such quite distinct causes for ethnic differences as these can hardly be made responsible for one and the same effect—namely North-South polarization. It cannot be denied that, like other factors too, racial configuration also does play an important rôle in the process of polarization, but it does not account sufficiently for its origination.

10. *Summary and Discussion*:

Representative literature of widely different countries testifies to the existence of mutual and typically repeated attitudes of Northerners to Southerners and *vice versa*. These attitudes conform to a "polarization pattern" and play a not negligible rôle in the culture configuration of their respective areas. Apart from such mutual attitudes of Northerners and Southerners, there are

also factual differences between them. Their interconnection with quite different sets of conditions or situations has been considered. Of these we discussed (a) climate (b) magnetic poles and equator, (c) mountains and plains, (d) diffusion centres of expanding cultures or religious movements and (e) racial differences.

Among the five possible explanations here considered, the first —climate—and the last—ethnic differences—appear to be present in all polarization areas. But whilst climate does exercise an influence of a similar nature on various different polarization groups, ethnic differences appear to be of quite heterogenous nature.

However, a direct linkage each of climate and area—polarization seems excluded by the observation of "southerly polarized" culture regions which are repeatedly and typically situated to the North of northerly polarized regions within their southern neighbour-countries and *vice-versa*. This polarization pattern conforms to the situation of magnetic units stringed in a north-southerly line. However the theory of a direct linkage between the magnetic-poles and the culture-poles seems likewise to be contradicted by the reversal of polarization on the southern hemisphere. The last three sets of possible explanations, *i.e.*, mountains and plains, the diffusions of cultural, or religious movements and ethnic differences are not found to be consistently coinciding with the observed polarization patterns, though they could certainly add to the process of differentiation and the stressing of a North-South antithesis, which has been promoted by other factors.

A possible explanation of the phenomenon would suggest a combination of the climatic factor with the magnetic polarization principle in the following manner:

> Within every given area, the southern region is climatically more typical of "The South", as is the same area's northern region,—even though such a "southern region" may be actually northern,—if compared to the northern region of the neighbouring country in the South (*Cf.*: South China or Iran *versus* North India; Austria or Southern Germany *versus* North Italy; South England or Eire *versus* the North of France); —yet such relatively southern regions of absolutely northern countries remain relatively "southern", if compared to their own northern counterpart in the same main area or country,

and also with the northern region of their neighbouring country in the South.

Assuming increased mobility for both; individual humans, as well as for sets of institutions and ideological movements *within* every given area, we should expect that migration and the selective process would result in the concentration of such individuals and culture forms which are best fitted to southern conditions in the South of the given area and *vice versa*.

The evidence from historical, literary and ethnographic sources suggests thus the following interpretation of the North-South polarization phenomenon among large literary societies. The relative seclusion in which individuals, belonging to different temperamental types are living inside their respective national territories, brings about the breaking up of the entire population that lives between pole and equator, into as many "polarized" sub-entities as there are areas. Each one of these develops under otherwise different circumstances one typically northern and another typically southern sub-region.

The characters of these paired opposites appear primarily determined by climato-geographical circumstances in the sense that southern sub-regions of each given area foster, or attract, individuals and institutions of one kind living in that area, whilst northern sub-regions foster or attract individuals and institutions of another—thus giving rise to the cultural North-South polarization phenomenon.

However, this kind of typically repeated dual segmentation of societies in space, accompanied as it is by mutual feelings of superiority, rivalry and yet—a kind of dependence, bordering on "hate-love" is not confined to the North-South situation in large literate societies only. The psychological and subjective aspect of North-South polarization has indeed much in common with the mentality, developed in "tribal populations" whose social life is determined by phratries, moieties and other features of *Dual Organization.*

(1) The sense of difference between the two groups is equally strong, as the ever present feeling of belonging to the same unit, inspite of all the much stressed differences. True; this feeling of mutual belonging is expressed in dual organization, by the strong ties, created through exogamy and thus by mutual affinal relationship;—but in the case of North-South polarization among literate

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societies, only by an ideological cohesion and in some cases a certain amount of nostalgic admiration, of one for the other.[3]

(2) Northern and Southern halves of "polarized" big societies visualize themselves as being connected with some ideological symbol or other which bears comparison with the frequently used signs of phratries or moieties among small and pre-literate societies. Such signs are *upper* and *lower, sun* and *moon, bigger* and *smaller, sky* and *earth* or any other paired opposites. In the case of polarized literary societies this pairing of opposites takes its raw material from such ideological sources as linguistic, political and particularly religious affiliations. Similarly as among "primitive" dual organizations, so also is in polarized complex societies no consistent identification traceable for any one particular symbol in recurrent halves! The same religion may be considered characteristic of the northern half, in one people (or area),—and of the southern in another. And the same is true of language or any other such "attributed quality". What, however, remains constant are the typically repeated attitudes between the two halves.

(3) The persistence of polarization feelings inspite of far-reaching changes in the fates of a nation, or a country,[4] is thus a more than accidental aspect of this complex phenomenon. It shows that, like dual organization, it is an essential part of the culture process;—not only the dramatization of any given, transitory tension over minor conflicts.

North-South, — and Dual-patterns have also in common the grouping of opposing forces into two camps which, inspite of their mutual opposition, yet depend one on the other for the very process of procreation, in the case of exogamous moieties, and for the

3. The romantic description and as it were glorification of Italy in German literature, the popularity of "Gone with the Wind" in the northern U.S.A., and the north-Indian admission that the home of orthodox Hinduism is in the South (Nehru, 1946: 110) are as characteristic of such feelings, as the German slogan of *Aufnordung,* the late North Indian Sir Muhammad Iqubal's idea to call the North of his earstwhile mother-country, namely undivided India,—*Pakistan*—"the pure land", or Lin Yutang's admiration for the "simple thinking and hard living" of the "tall and stalwart, hale, hearty and humorous" northerners, who gave "China all the native imperial dynasties" (1936: 16).

4. *Cf.*: The feelings of modern and pre-Islamic South-Arabs towards the Northern Arabs, *i.e.*, the *Qua'tan* to the *Adnan* and *vice versa* (Fischer, 1913: 628).

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existence of a complete cultural unit,—in that of polarized large nations.

Radcliffe Brown, discussing moieties and other forms of dual organization, suggested a parallel of these phenomena with the Chinese *Yin-Yang* concept. He pointed to more than merely accidental similarities that are existing between the two sets of divisional systems (1951: 21).

Yin stands in Chinese symbolism surprisingly enough for *female* and contrary to the mythological concepts in most other parts of the world, also for *right* and *north;*—Yang for *male,* and also for *left* and *south* (Baumann, 1955: 106). But otherwise there exists in the general attitudes, so far reviewed among North-South polarized populations, undoubtedly an equation between north—equal to male, and south—equal to female on the northern hemisphere, with a possible reversion of this situation on the southern hemisphere. Identification of north-male and south-female seems also indicated in the conventional arrangement of charts, maps and globes which places north up on top, and south down below, although there is no inherent geographical reason for this convention (Fordham, 1921: 40; Ehrenfels, 1956a), of up-with unless we accept as real the widespread mythological equation of up with male, and down with female, recently summarised by Baumann (1955: 138).

Our discussion advanced the hypothesis that relative,—*not* absolute proximity to warmer and colder climes *within a given region* is conducive to migrations and selective processes, resulting in the polarization phenomenon or in subjective feelings of superiority, etc., of Northerners to Southerners and *vice-versa.* Quite apart from the reality of North-South differences, such subjective feelings loom large in the consciousness of polarized peoples and shape in that way their attitudes towards one another.

In this process the same polarized dichotomy of units is being produced culturally, which we find on the one side in all realms of nature, and on the other in a wide range of mythological and religious features. The essential duality or "double sex character" of the Great Deity among such diverse and otherwise admittedly different and disconnected peoples as the food-gathering Kadar (Ehrenfels, 1952: 190, 287-294), the mountain dwelling agricultural Khasi (Ehrenfels, 1950: 31) and the highly diversified literate Hindus in the plains of India with their Shiva-Shakti-complex and

its representation of God as Ardanari (half man, half woman);—they all would thus appear as so many aspects of polarization. We see here at work a formative principle which has also been found at the root of cultural differences between complementary regions in countries where North-South Polarization is in evidence.

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X

INSTRUCTIONS REGARDING THE CONSTRUCTION AND MAINTENANCE OF THE HORSE STABLES AS LAID DOWN BY KAUṬILYA, VĀGBHAṬA, JAYADATTA AND NAKULA

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In the Chapter on *Cavalry* of Prof. V. R. R. Dikshitar's recent book on *War in Ancient India* we are told as follows[1] about the origin and development of Indian cavalry: —

(1) We learn from Megasthenes and Kauṭilya's *Arthaśāstra* that there was a well-organized and efficient cavalry in the army of Candragupta.
(2) The cavalry as an organized force may be traced to the post-vedic period but not earlier, though there are references to horses and war-chariots drawn by horses in the *Ṛgveda.*
(3) We have not a good number of horses among the Indus valley finds recently unearthed.
(4) In the *Atharvaveda,* however, we hear of dust-raising horsemen.

If the cavalry as an organized force was a development of the post-Vedic period, the construction of the royal stable must be presumed to have developed during the post-Vedic period. At any rate in Kauṭilya's *Arthaśāstra* we find a very detailed description[2] of a royal stable under the special care of the *Aśvādhyakṣa* or Superintendent of Horses. I reproduce below this description as I want to compare it with similar descriptions of the royal stable from other sources later than Kauṭilya's treatise. Kauṭilya observes: —

"The Superintendent shall have a *stable* constructed as spacious as required by the number of horses to be kept therein, twice

1. Vide p. 174 of *War in Ancient India* (Macmillan & Co., 1944).
2. Vide p. 146 of Eng. Trans. of *Arthaśāstra* by R. Shama Sastry, 1929.

as broad as the length of a horse, with *four doors* facing the four quarters, with its *central floor* suited for the *rolling of horses*, with projected front, provided with *wooden seats* at the entrance, and containing monkeys, peacocks, red-spotted deer (*pṛṣata*), mungoose, partridges (*cakora*), parrots, and maina birds (*śārikā*); the *room for every horse* shall be four times as broad or long as the length of a horse, with its *central floor* paved with smoothened *wooden planks*, with separate compartments for fodder (*khādanakoṣṭhaka*), with *passages for the removal of urine and dung* and with a *door* facing either the north or the east. The distinction of quarters (*digvibhāga*) may be made as a matter of fact or relatively to the situation of the building."

Let us now compare the above description of the royal stable with other descriptions of the *Aśvaśālā*. In the *Aśvāyurveda* of Vāgbhaṭa, son of Vikrama (B.O.R. Institute, *Ms. No.* 581 *of* 1899-1915, dated *Saṁvat* 1701 = A.D. 1651) we find 31 verses devoted to the description of अश्वशाला (folios 50-51). These verses read as follows: —

" यं पठित्वा पटीपांसोजांते वैद्यसूनवः ।
सोधिरोरहस्यास्य क्रियार्थमभिधीयते ॥ १ ॥

निःशेषर्तुपचारार्हा **शाला** कार्यमनोरमा ।
शुभयोगर्क्षवारेह्नि **वामेन स्वामिवेश्मनः** ॥ २ ॥

यथाशास्त्रं भुवः कृत्वा परीक्षां वास्तुपूज (नम्) ।
संपूज्ये **श्रियमादित्य**मादौ निर्वर्त्य शांतिकम् ॥ ३ ॥

संप्रतिष्ठाप्य **रेवंत**मुच्चैःश्रवसमादरात् ।
कारयेत्**तुरगागारं** दशहस्तसमुच्छ्रितम् ॥ ४ ॥

Verse 2—Compare *Nakula* (1) " नृपवेश्मवामभागे........कारयेत हयागारम् ।"
Verse 4—According to *Prakrit-Hindi Dictionary* (पाइअसद्दमहण्णव) **रेवंत** (रेवन्त) = (1) a son of *Sūrya;* (2) Name of a deity (" **रेवंत**तणुभवा इव अस्सकिसोरा सुलक्खणिणो ।" धर्मविधिप्रकरण, Ahmedabad, 1924, p. 142). See also सुपासनाहचरिअ (ed. by Hargovindadas, Benaras, 1918, p. 59) composed in *A.D. 1143*.— जयदत्त also prescribes the worship of god रैवंत in the अश्वशाला (" शिरसि स्थापयेद्देवं **रैवंतं** पूजयेत्सदा ॥ ५ ॥")

अयामव्यासनिष्कासप्रवेशसमुखं दृढाम् ।
तत्रांतर्द्धिकरोत्संधकार्यं **खानककोष्ठकम्** ॥ ५ ॥

पांशुलं तद्बहिस्थानं पृथक् प्रति निरूपयेत् ।
ह्लावनाय प्रतिप्रातर्लोचार्थनाम संकटम्(?) ॥ ६ ॥

सप्ताहं सत्रपास्तत्र गावश्चाथरा: विशुद्धपे(?) ।
तदूर्ध्वं विधिवद्वह्निं संपूज्याश्वान् प्रवेशयेत् ॥ ७ ॥

उत्तराभिमुखास्तत्र वाहा: सूर्य: पुर:सरा: ।
दक्षिणाभिमुखा योज्यास्त्वन्योन्यमविरोधिन: ॥ ८ ॥

निद्राभ्येति यथा रात्रौ वह्निसौख्यं यथा भवेत् ।
योजनीयास्तथा चारु रुक्मनिष्कैरलंकृता: ॥ ९ ॥

चारुचर्ममयै: कंठे कोमलै: **प्रतिबंधनै:** ।
पालनीया हया बद्धा यथाधुर्यानुपूर्वश: ॥ १० ॥

वांसोदावकुठारादि कर्त्तव्यं तत्र संनिधौ ।
द्रोणीपिटककुंडानि चोपयोगीति धारयेत् ॥ ११ ॥

उच्चै:श्रवस् = *Indra's horse* churned out of the ocean (*Kumārasambhava*, II, 47 — " उच्चैरुच्चै:श्रवास्तेन **हयरत्न**महारि च ")

Verse 5—Cf. खादनकोष्ठक mentioned by **अर्थशास्त्र**. Compare also **नकुल:**—

" **खादनकोष्ठक**मस्मिन्हस्तद्वितयं समुच्छ्रितं कुर्यात् "

Verse 7—Cf. जयदत्त:—

" **अग्निकार्यं** तत: कृत्वा द्विजान्संभोज्य चादरात् ।
कृत्वा पुण्याहवादित्रं ततो वाहान् निवेशयेत् ॥ ८ ॥"

Verse 10—Cf. **अर्थशास्त्र:**—"Qualified teachers shall give instructions as to the manufacture of proper *ropes* with which to tether the horse"—"Those who move the horses (सूत्रग्राहक), those whose business is to tether them in stables....shall satisfactorily discharge their specified duties and shall, in default of it forfeit their daily wages". (Vide Chap. on **अश्वाध्यक्ष** —p. 150 of Eng. Trans., 1929).

पटवो मंदुरापाला कुशला ये वनोद्भता: ।
सुमनोदुर्मनोभाववेदिनस्तत्र कारयेत् ॥ १२ ॥

अनुकूला कुलीनाश्च लघ्वस्त्रग्रहणक्षमा: ।
कशाहस्ताविधा: पूजयेत्प्रीत: प्रत्यहं तत्र पावकम् ।
पूजामंत्रैर्विशेषेण कुर्यात्पर्वण्युपागते ॥ १३ ॥

गंधैर्धूपैरलंकारैर्माल्यै: स्थानानि भूषयेत् ।
दीपानुद्दीपयेन्नक्तं रक्षोघोरोरग इह: ॥ १४ ॥

निशेभ्दुत(?)विकाराणां प्रत्यभिज्ञानहेतुकान् ।
मक्षिकावारणान् कुर्याच्चारुसूत्रमयांस्तथा ॥ १५ ॥

कर्त्तयेच्च खुरान्केशान् क्षौरनक्षत्रवासरे ।
शकृन्मूत्राक्तगात्राणामश्वानां स्वपतां निशि ॥ १६ ॥

नाविर्भवन्ति दुर्व्याधिरक्षक्षुद्राद्युपद्रवाः ।
अतो रात्रौ शकृन्मूत्रे शालातो न विनिर्हरेत् ॥ १७ ॥

हयानां हि हरिद्रैव पूजा मांगल्यकारिणी ।
क्षुद्ररक्षकृतक्षोभहंत्री त्वष्टोवनाशिनी ॥ १८ ॥

स्नातानां भूषणं तस्मादेतेषामनया मतम् ।
मृगशृंगखुरत्वग्भिर्गोजावीनां च रोमभि: ॥ १९ ॥

शकलै: शल्लकस्यापि मार्जारस्य त्वचा भवेत् ।
रक्षोघ्न: शांतिकृन्मेध्यो धूपो देयोत्र सर्वदा ॥ २० ॥

संशोष्यमेकमाहृत्य कणासिंधूत्थनागरै: ।
सनिशैरुपलिप्याथ शुष्कं संचूर्ण्य कारयेत् ॥ २१ ॥

प्रदोषे धूपमश्वानां रक्षोविद्रावणं शुभम् ।
ज्वरी सिंघाणकी कुष्ठी घृणी यक्ष्मी च यो भवेत् ॥ २२ ॥

पृथगौषधसंभारपूर्णं गुप्तमनुत्तमम् ।
कार्यास्तत्रोपचारज्ञा दृष्टवैद्यार्थकारिण: ॥ २३ ॥

तत्संसर्गेण दूष्यन्ते वाजिनोन्येपि नीरुजः ।
व्याधितानामथ स्थानं पृथक् प्रतिनिरूपयेत् ॥ २४ ॥

कृतकृत्यार्थविशिष्टाश्चतुराः प्रतिचारकः ।
हयायुर्वेदिव(? दवि)ज्ञानसंपन्नस्य निकेतनम् ॥ २५ ॥

तत्पूर्वेण च वैद्यस्य नातिदूरेण कारयेत् ।
सूतिकागारमीशप्रासादपश्चिमे(?) ॥ २६ ॥

यत्र क्रीडन्त्यसंबाधमर्भका स्वमनीषया ।
यथर्तुमंदुरास्थानसौख्यमायान्ति वाजिनः ॥ २७ ॥

दुराधिव्याधिनिर्मुक्ता भवन्तीप्सितसिद्धये ।
॥ इति अश्वशालाविधिः ॥

The foregoing chapter gives us a good picture of the *aśvaśālā* (Horse-stable and its accessories) some time prior to the import of Persian and Arabian horses to India (between 800 and 1300 A.D.) as there is no reference in it to the पारसीक and ताजिक horses mentioned as the best horses by जयदत्त in his अश्ववैद्यक.

जयदत्त in his अश्ववैद्यक (*Bib. Indica*, Calcutta, 1886) records the following verses about the अश्वशाला:—

Pages 133-135 —

" प्रागुदक् प्रणते देशे स्थाणुकण्टकवर्जिते ।
चिताचैत्यविहीने च **शालां** कुर्वीत पण्डितः ॥ ४ ॥

शुष्का **शाला** च कर्त्तव्या इष्टकाष्ठेन संस्थिता ।
शिरसि स्थापयेद्देवं **रैवन्तं** पूजयेत् सदा ॥ ५ ॥

कार्य्या त्रिहस्तविस्तीर्णा लाक्षायाः पिण्डिका शुभा ।
शाला प्रमाणदीर्घा च तस्यां वासं प्रदापयेत् ॥ ६ ॥

Verse 5—Cf. वाग्भट (अश्वायुर्वेद)—
" संप्रतिष्ठाप्य रेवंतमुच्चैःश्रवसमादरात् "

द्वौ हस्तावुच्छ्रयेणास्या मानञ्चैव प्रकीर्त्तितम् ।
तर्ज्जकं काष्ठदण्डांश्च प्रान्तेऽस्याः स्थापयेद्वहिः ॥ ७ ॥

अग्निकार्यं ततः कृत्वा द्विजान्संभोज्य चादरात् ।
कृत्वा पुण्याहवादित्रं ततो वाहान् निवेशयेत् ॥ ८ ॥

सम्मुखान् स्थापयेत्तांस्तु पुष्पगन्धादिपूजितान् ।
रज्जुद्वयनिबद्धांश्च पश्चात्पाशेन संयुतान् ॥ ९ ॥

लौहञ्च निम्बपत्राणि गुग्गुलुं सर्षपान् घृतम् ।
चैलबद्धं **वचां हिङ्गुं** बध्नीयाद्वाजिलाङ्गुले ॥ १० ॥

समीपे **वानरः** कार्य्यः वाजिनां नित्यतो बहिः ।
सवत्सो **वृषभश्चैव** शुक्रो यश्चापि **कुक्कुरः** ॥ ११ ॥

शालापार्श्वे **कुटीं** कृत्वा स्थापयेत्**सर्वभेषजम्** ।
घृततैलानि पक्कानि पुटकां **नालिकां** तथा ॥ १२ ॥

आलोकं कारयेत्प्राज्ञः प्रदीपैः सर्व्वरात्रिकैः ।
जाग्रतः **पुरुषास्तत्र** तिष्ठेयुः **शस्त्रपाणयः** ॥ १३ ॥

वालुकापूरितं कार्य्यं संस्कृत **चत्वरं** तथा ।
लुठनाय च **वाहानां** भवेच्च **क्रमणाय** च ॥ १४ ॥

Jayadatta's description of a royal stable, though not as elaborate as that of Vāgbhaṭa (son of Vikrama), is sufficiently representative.

Nakula in his अश्वचिकित्सित (*Bib. Indica*, Calcutta, 1887, pp. 62-63) has a Chapter (No. 18) on the construction of an अश्वशाला as follows:—

"**नृपवेश्मवामभागे** शुभदिने तु कारयेद्**धयागारम्** ।
पूज्य श्रियं प्रयत्नाद्**उच्चैःश्रवसं** प्रतिष्ठाप्य ॥ १ ॥

सुशुभे भूमिविभागे पूर्व्वोत्तरजलप्लवविधानात् ।
तस्मिन् शालां क्षिण्णां दशहस्तसमुच्छ्रितां कुर्यात् ॥ २ ॥

Verse 1—Cf. वाग्भट (अश्वायुर्वेद):—

"संप्रतिष्ठाप्य रेवंतम् **उच्चैःश्रवस**मादरात् ।"

खादनकोष्ठकमस्मिन् हस्तद्वितयं समुच्छ्रितं कुर्यात् ।
संस्थाप्य वृषभगावौ सप्ताहं वाजिशालायाम् ॥ ३ ॥

अत ऊर्ध्वं तु हुताग्निः प्रवेशयेद्वाजिनो यथायोग्यम् ।
कुशलैस्तरुणैर्दक्षैरनुकूलैः स्थानपालैश्च ॥ ४ ॥

कृतमङ्गलसंस्कारा बन्धव्यास्तेऽत्र चोत्तराभिमुखाः ।
नात्यायता न शिथिलाः स्थाने वा दक्षिणाभिमुखम् ॥ ५ ॥

वैद्यानां तुरगाय समीपं **गृहं** कारयेत्पूर्वम् ।
कार्या**सिकेन सूत्रेण** माक्षिकाणां निवारणम् ॥ ६ ॥

गन्धैर्माल्यैर्धूपैः स्थानानि विभूषयेदलङ्कारैः ।
सविशेषं त्वश्वपीतौ हुताग्निं पूरयेद्विद्वान् ॥ ७ ॥

स्वच्छिद्रं नातियवसं यथा पश्यन्ति वाजिनः ।
स्थानं चैव पृथक्प्राप्तं प्रयत्नं रोगिणां न वै ॥ ८ ॥

कोष्ठी कुष्ठी ज्वरी यक्ष्मी परस्परं दूषयति क्षारैः ।
तिथिवारे केशांश्च खुरांश्च प्रघ्नन्ति दीर्घान् ॥ ९ ॥

अश्वस्याङ्गे प्रलिपेद्धरिद्रया वरिष्ठया मङ्गल्या च ।
सुपवित्रान् दोषघ्नैर्विभूषयेदलङ्कारैः ॥ १० ॥

I have so far recorded the evidence of four different Sanskrit treatises about the horse-stables and their construction, one of which, viz., the *Arthaśāstra* may be said to give us the description of a royal horse-stable current in the Mauryan period of Indian history, while the remaining three treatises, viz., those by *Jayadatta, Vāgbhaṭa,* son of Vikrama, and *Nakula,* may be taken to represent the royal horse-stables current *between say about A.D. 500 and 1200.* It must of course be presumed that these horse-stables owe much to the ancient Indian tradition about the construction and maintenance of royal horse-stables. All these treatises, however, do not give us a contemporary picture of a

Verse 3—खादनकोष्ठक is mentioned by अर्थशास्त्र; वाग्भट (अश्वायुर्वेद) mentions "खानककोष्ठकम्"

royal horse-stable, though they record the theory about the construction of such a stable. We must, therefore, find out if other Sanskrit texts can help us in providing graphic pictures of royal horse-stables. In this connection I have to record the following pen-picture of King Harṣa's royal horse-stable as recorded by the poet Bāṇa of immortal fame in the *Harṣacarita* (Chapter II—Eng. Trans. by Cowell and Thomas, R. A. S., London, 1929, pages 50-51):—

"The door-keeper (chief of the door-keepers, Pāriyātra, Harṣa's favourite), having come up and saluted him (Bāṇa) addressed him respectfully in a gentle voice, "Approach and enter, his highness is willing to see you." Then Bāṇa entered, as he directed, saying "I am indeed happy that he thinks me worthy of this honour.

"He next beheld a *Stable* filled with the king's favourite horses from *Vanāyu, Āraṭṭa, Kāmboja, Bharadvāja, Sindh,* and *Persia,* red, dark, white, bay, chestnut, dappled like partridges, marked with the fine auspicious kinds of marks, with eyes spotted with white, or marked with light yellow spots in groups like the Pleiads; with long thin jaws and short ears, and round delicate well-proportioned throats, with long upraised curved necks like sacrificial posts, with their shoulders stout and robust at the joints, their chests full and projecting, their legs thin and straight, and their round hoofs hard like masses of iron; their round bellies seemed solid, as if they had no entrails within them, lest they should be broken by their excessive swiftness, and their broad flanks were divided by a long depression, with the hairs like new shoots swaying about in the wind. They were with difficulty restrained by the *ropes* fixed tightly in the ground on both sides, and they seemed to grow longer as they struggled with one foot thrust out of the ropes' confinement, and the studs on their necks were ornamented with cords of many strings,—their eyes were closed, and they kept moving their mouths, which were flecked with bits of foam dark with the juice of *dūrvā* grass, while the skin itched and twitched about and was bitten for a moment and then let go by the teeth. Some stood, lazily moving their tails, with one side of their loins drooping as they rested on one hoof, seeming to ponder in sleep, and slowly uttering interrupted neighs, while the ground was marked by their hoofs, whose foreparts rattled with the noise of their foot-rests as they struck upon them; others sought

for food, having their longing excited by the stray morsels of fodder scattered about, while the pupils of their eyes trembled for fear at the yells of the angry *caṇḍalas* who guarded them. They seemed to have a lustration-fire always near to protect them, from their bodies being yellow with a saffron unguent rubbed on them, while an awning was spread on them and the tutelary deity (Govinda) was worshipped before them. As he looked, his mind was filled with curious wonder, and he entered a little further within, and saw on his left hand an *elephant stable,* etc."

I hope scholars interested in the subject of this paper would bring to light some more texts regarding horse-stables and if possible, some contemporary descriptions of horse-stables like that given by the poet Bāṇa in the *Harṣacarita.*

XI

AYINIKUTHU CHĀLA — A CHERUMA HABITAT[1]

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I

I met Chelli in May 1954 while making preparations for a study of the Cherumakkal of Ernad Taluq in South Malabar. Chelli is a Cheruma by caste. He is a *Mōōppan* of the Ayinikuthu Chāla, otherwise called Chālapādu. By profession a Cheruma is an agricultural serf serving on the lands of his master. In the past, all the members of a Chāla, were the slaves of some landlord. The word Chāla is used for three different, though interconnected concepts. It means a Cheruma hut, refers at the same time to a group of Cheruma huts, and finally to the entire region or locality which the Cherumas inhabit,—generally some distance away from that of the higher caste.

Ayinikuthu Chāla is an area occupied by the Cherumas in Manjeri village of Ernad Taluq in South Malabar. When I visited this place I found nine small huts; each has a little space near it where its dwellers cultivate roots or vegetables. Laterite stones, bamboo and dried grass are used in constructing these small huts which are mostly windowless and the floor of the hut is smeared with cow-dung paste. Cattle sheds would be generally attached under the same roof.

Three *thara,* i.e., raised platforms are seen in front of the *Mōōppan's* hut. The Cherumas are devotees of the Goddess Kāli at Kodungalur. Offerings and prayers are made to Her at these platforms before starting on a pilgrimage to Kodungalur, and again

1. The data for this paper come from researches among the Cherumas carried out in 1954. I am indebted to Dr. Ehrenfels for his critical comments. My grateful thanks are to my friends Mr. P. V. Velayudhan and Mr. Kuttisankaran Nair of Manjeri for having explained to me the kinship system among the Nayars and for having provided me with the Cheruma photographs.

repeated after return from that shrine. Chelli, the chief of the Chāla is a *Komaram,* i.e., an oracle of the Kodungalur Goddess to the people of that locality. A Cheruma acquires the status of a *Mōōppan* if he makes for three consecutive years a pilgrimage to the Kodungalur shrine without a break.

A Cheruma has always the name of an ancestor, *Muthappan,* related to him through his mother. In a Chāla relatives through one's parents usually live within the same compound though in different huts.

II

The chief of the Chāla settles all disputes between persons living there, and he is also versed in the practices and customs of the community. Often the oldest of the Chāla is chosen as the chief. This, however, appears to be a result of recent acculturation, for in the past Cherumar had no chief. A *tampuran* of the local *Kovilakam,* according to Chelli, instructed them to have a chief who would decide all important issues of life for them.[2] It seems thus only the post of the chief or *Karanavar* came to existence. The old *Karanavars,* like Chelli, do not wish to imitate the new modes of dressing though they are satisfied with other aspects of acculturation to which young men and women of the Chāla expose themselves.

The women, Cherumis, of this area work in the fields like the men who, in addition, also go for cooly-work to the houses of the higher castes. Now-a-days Cherumas send their boys and girls to the schools. Kāliappan, another Cheruma whom I came to know is a sweeper in the Board Elementary School at Manjeri and he lives quite a clean and happy life with his family.

III

Generally, a man, his wife and their children only would live together in a hut. Each family owns its own hut though the land of this Chāla belongs to the Manjeri *Kovilakam.* The Cherumas who were once the slaves of the *Kovilakam* ("Kolam adimaikal") were provided with this locality to build their own huts and live in contentment. From four to ten members live in a hut. Chelli

2. Ehrenfels (1952) pp. 74, 75. Here we find that how kadar, a group of food-collectors, rejected the imposition of a *Mōōppan* by Government.

said that there are over 50 Cherumakkal living in the Ayinikuthu Chāla and the age of their Chāla is over hundred years.

In the past the Cheruma term for the father was *tha*. The mother was called *chya*. Now they call the mother *amma* and the father *achan*, which perhaps is due to their long and continuous association with the higher castes. The husband does not call the wife by her name. The children are called by pet names such as Mānu, Appu or by their personal names.

Among the Cherumas one's own elder brother is called *chācha* whereas the high-caste Nayar calls his elder brother *Jyēshtan* or *E'ttan*. The Cheruma calls his own elder sister *pengalamma* whereas the Nayar calls his elder sister *Jyēshtathi* or *E'ttathi*. A Cheruma uses the term *marumakan* to refer to his daughter's husband. To refer to his son's wife a Cheruma says *Marumakal* or *Mālu*. The Nayar also uses the terms *Marumakan* and *Marumakal* to refer to his son-in-law and daughter-in-law. The term *Muthachi* among the Cherumas is used to denote one's own wife's elder sister, and the term *Ilachi* among them refers to one's own wife's younger sister. The terms *Muthachi* and *Ilachi* are applied also to denote the wives of the elder and younger brothers respectively. Among the Nayars the elder brother's wife is called *E'ttathiamma*. One's own brothers' and sisters' children, among the Cherumas, if boys are called *Kunjāne* and if girls are called *Kunjāle*. Among the Nayars the sisters' children if boys are called *Marumakan*, and if girls are called *Marumakal*. Among the Cherumas the father's father is called *Muthappāi* or *Muthan* and the father's mother is called *Muthiamma* or *Muthi*. They use also the terms *Muthan* and *Muthi* to refer to their mother's father and mother respectively. The Nayars call their paternal and maternal grandfather and grandmother by the terms *Muthachan* and *Muthachi*.

The Cherumas have such names as Kunjan, Chēlli, Kiliyan and Nādi and their women have names such as Ōmala, Kāli, Nādichi and Pāvuka.

The Cherumas do not marry outside their caste. The Cherumas of this Chāla follow the monogamic type of marriage. The custom of marrying a deceased brother's widow is practised; The Cheruma may take a second wife only one year after the death of his first one.

The Cherumas always marry outside their own Chāla, i.e., local unit. After marriage a girl comes to stay with her husband's people; but in the past matrilocality was observed, as I heard from Chēlli. The father is the head of the family; and the son inherits the father's house after the latter's demise.

The Cheruma stands aloof from a Kāllādi, a Kanakkan or a Perumparayan. He considers these as inferior to him in caste status and it is wrong to think that these are only sub-divisions of the Cherumas.

IV

The Cherumas believe in evil spirits and demons. Though Kāli of Kodungalur is the deity whom they worship, they practise also witchcraft. Chēlli informed me about what happened to his son, and how he was able to get rid of the evil influences by performing rites which he performed when the doctor of the region could not cure his son of his sickness. I would like to give Chēlli's enthusiastic account in his own words:—

"My son was playing near the *Chettiar Kulam* one day with some of his friends. This tank is in Melākkam, a place far from that of ours. While playing my boy was pushed into the tank by one of the lads. He fell ill that night and the boy suffered from high temperature. I took him to the local hospital where he remained for some days. But he did not get better. I took him to an hospital doctor (allopathic specialist) of the locality, but he too was not able to cure my boy's illness. My wife became sad and in anger remarked:—"Why do you take the boy here and there? Can't you do it yourself? You are an expert in curing illness! Aren't you? How many you have saved from the clutches of death! Haven't you? Then why not attempt at least to cure our dear child of his sickness? Have mercy, do attempt for my sake." Hearing her words I thought that it was my duty to do something in the matter. I wanted to know whether the boy was possessed by some evil spirits. So I thought it wise to study the *Rāsi*. When I looked into it, I found that the poor boy was possessed of five evil spirits. I had to adopt ways to get rid of them from the boy."

Here I interrupted for a while and asked Chēlli what did he mean by *Rāsi,* and what ways did he adopt to get rid of the evil spirits. Chēlli was reluctant to talk to me about the *Rāsi,* but

I knew from him that it was a system of astrology which the Cherumas have. As it is hardly possible to discuss about the implications of the *Rāsi,* I shall conclude with what Chēlli told me regarding the ways he adopted to save his son's life.

Chēlli continued his talk. He said:—"I started for a place named Mangalacheri. It is near Manjeri. I went there and collected seven handfuls of earth from an ant hill and returned. Then I had water drawn from seven wells. I made three images with these resembling human form and placed them on *Izhuvachémbu* leaf which in colour and form is similar to a plantain leaf. Having done all these, I called the evil spirits by name. I sacrificed a cock in front of this leaf and also offered husk to the spirits. On the leaf were also placed twenty-one lighted cotton-wicks. I held the whole leaf with the burning wicks before the sick boy and rotated this thrice over his head. Then I hurried with this leaf containing images and burning wicks to the neighbouring stream flowing beside the fields. I sacrificed another cock there and smeared the three human-like images with its blood. Finally, I allowed the leaf and its contents to float in the stream. Here ended my prayers for the recovery of my son, and I should say that from the day I satisfied and got rid of the evil spirits my son slowly showed signs of recovery and he was well within a week."

V

A Chāla is generally situated near the fields. The surrounding environment is quiet but for the barkings of a dog at the sight of a stranger. One cannot say that a Chāla is hygenically clean; but the Cherumas who spend the full day in the fields or in doing cooly-work have this habitat only to spend the nights in mirth and rest. Some of them do have a clean hut with a little verandah. Mostly the aged and the children alone remain in these huts.

The Cherumis also return by evening after receiving the day's quota of paddy or wage from their masters. We see them in the local shops making small purchases. Now-a-days the higher castes allow them to enter the gates of their homes which was not the practice in the past. They bring manure for the trees in the compounds of the upper caste homes. They make bamboo baskets for sale. The relations of these people with the other castes in the region seem peaceful, and I found that there is no lack of res-

pect among them for the upper castes. During festivals in Kāli temples the Cherumas indulge in dances, though they do not enter inside the temples.

There are families even today which are attached to a wealthy landlord who gives these land to live, and all necessary provisions during times of birth, marriage and death.

These unsophisticated children of the soil, Cherumakkal, are now adopting the dress fashions of their superiors. But Chēlli told me that on the whole they liked the changes coming over their community, and that they would be happy to see their children's lot much better to what their own was.

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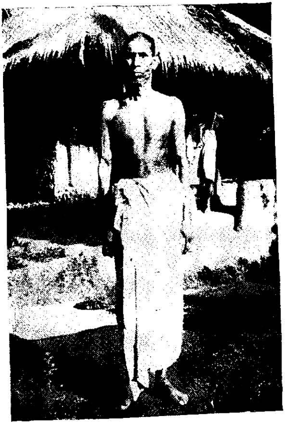
A Cheruma Chāla



Chelli, the Cheruma

A Cheruma family

XII

ON THE DATE OF THE DAŚAKUMĀRACARITA

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1. As to the date of the Daśakumāracarita very diverse views have been put forward. It is not necessary to enter into details here, as the various standpoints and arguments have lastly been most competently summarized by Professor S. K. De, History of Sanskrit Literature, I, 207 ff. Although nothing definite can be said about the problem, many scholars no doubt will be inclined to agree with Prof. De's rough estimation that the genuine part of the work is likely to have been composed at about the same time as the Mṛcchakaṭika (probably in the period of the earlier Guptas). The language of the Daśakumāracarita would seem to confirm this, as it shows the general characteristics of early classical Sanskrit. In the following brief note an attempt will be made to determine more precisely the relative chronology of Mṛcchakaṭika and Daśakumāracarita by a discussion of a single lexical fact that they may have some importance for this problem, viz. the word *saṁdhi-*, m. "breach, hole made by thieves in a wall of a building."

The use of *saṁdhi-* in this sense is attested in Sanskrit, Pāli, and Prakrit, and the word has remained in use up to modern times, cf. e.g. Hindi *sẽdh* f., id., *sẽdhnā* "to make a hole in the wall of a house", *sẽdhiyā* "burglar" (omitted by Prof. Turner, Nepal. Dict. 619 b, s.v. *sẽdh*). Nevertheless its origin is quite obscure. Neither can we explain how such a meaning may have developed from what on etymological grounds must have been the "proper" meaning of *saṁdhi-* (viz. "joint, juncture, junction"), nor is it clear at what time it may have come into existence. Not before the tenth century, indeed, do we find it recorded by one of the Indian lexicographers quoted in the Petrop. Dict. (cf. Halāyudha, 4. 86 *suruṅgā saṁdhir ucyate,* 5. 49 *saṁdhiḥ saṁśleṣarandhrayoḥ*). To Amara this meaning was, it seems, still unknown. It may be argued, it is true, that down from Manu we meet with

the expression *saṁdhiṁ chid-* (rarely *bhid-*, Kathās. 77. 58) for the making of a hole in a wall, e.g. *saṁdhiṁ chittvā tu ye cauryaṁ rātrau kurvanti taskarāḥ,* Manu 9. 276. It would be rash, however, to conclude that *saṁdhi-* "hole" accordingly can be traced as far back as the beginning of our era.[1] Böhtlingk left this point undecided in the smaller Petrop. Dict. on account of the purported occurrence of a word *saṁdhi-* "wall" in Pārask. G. S. 3. 4. 10-13. Hence the expression *saṁdhiṁ chid-* might signify as well "pierce a wall" (cf. *bhittibheda-* Pañcat. I. 28. 3 Bomb., 23. 11 Pūrṇabh., lex. *kuḍyacchedin-*) as "bore a hole" (cf. e.g. *bhittvā suruṅgām,* Kathās. 64. 54, *siṁhākrāntam eva cchedayiṣye,* Cārud. III. 9. 1, *bilam adārayat,* Mhbh. I, 3. 32 Bomb.). Although the meaning "wall" was based upon a faulty interpretation of the passage in Pāraskara (Oldenberg translates "He touches (the wall and the posts) at their eastern juncture..."), yet only the first explanation can be correct for chronological reasons. As a matter of fact, the term *saṁdhicchedikā-* for a woman guilty of burglary is already attested in the Kauṭilīya Arthaśāstra, in which work *saṁdhi-* still has the older meaning of "joint, juncture"; cf. p. 216. 10 (ed. Shama Sastry),[2] where *muṣitaveśmanaḥ praveśa-niṣkāsanam advāreṇa dvārasya saṁdhinā* refers to the entering or leaving of the house by any other way than the door or by breaking open the juncture (or joinery) of the door.[3] As a technical term, indeed *saṁdhi-* has remained in use in architecture to denote "wood-joinery". See P. K. Acharya, Hindu Architecture in India and Abroad, p. 112 (where it is stated that "Doors were mostly made of wood"). The 17th chapter of the Mānasāra owes its name (viz. *saṁdhikarmavidhānam*) to this term, which Acharya, Dictionary of Hindu Architecture (s.v. *sandhikarman*) defines as follows: "the joinery, the framing or joining of wood for the internal and external finishings of houses: thus the covering and lining of rough walls, the covering of rough timbers, the manufacture

1. Petrop. Dict., Tschoupak-Nitti Dolci-Renou, Dict. Sanskr.-francais.

2. Cf. Pāli *sandhichedaka-*, Buddh. Hybr. Sk. *saṁdhicchedaka-*, Pkt. *saṁdhichedaga-*.

3. See the German translation by J. J. Meyer, who rightly rejects (p. 818) the meaning "*suruṅgā*", which Gaṇapati Sastri had proposed for *saṁdhi-*. It may be added here that the *saṁdhisarpaṇam* which the snātaka much avoid according to Pārask. G. S. II. 7. 6, and which is translated 'crawling through narrow ways, or openings" (Böhtlingk, resp. Oldenberg) is likely to contain *saṁdhi-* in the sense of "interval".

of doors, shutters, sashes, stairs, and the like, are classed under the head of joinery". Cf. also *saṁdhibandha-* "a material that makes two bodies stick together, cement, mortar" (Inscr.). In 17. 10 *sandhikarman-* is mentioned in connection with *kuḍya-* "wall". In the light of these facts the circumstance that in the earlier literature *saṁdhi-*, when referring to holes in a wall, is exclusively found in the expression *saṁdhiṁ chid-* is significant.[4] This must have meant "to make a hole in the (wood-) joinery (or, in a juncture)."

2. While the artisans remained aware of the technical meaning of *saṁdhi-*, in the common speech this may have been obliterated as its use was restricted to the phrase *saṁdhiṁ chid-*. In the course of time *saṁdhi-* came to be used in the sense of "hole in a wall", which new acceptation may perhaps have arisen in the thieves' slang. One of first literary works to show this meaning is the Mṛcchakaṭika. That Śūdraka should have been particularly acquainted with such a slang would not be surprising if he is identical with Śūdraka, the author of *bhāṇas*. In any case, it cannot be questioned that he has deliberately exterminated the word *saṁdhiccheda-* in his recast of the older text of the Cārudatta. The semantic change appears most clearly from the fact that instead of *saṁdhiṁ chid-* he now uses such phrases as *samdhim kṛ-*, *kḷp-* (Pkt.), *utpāday-*, *dā-* (cf. also *saṁdhiṁ dattvā* Kathās. 64. 44). The following quotations may illustrate the fundamental difference between the Mṛcchakaṭika and the Cārudatta in this respect. Since Morgenstierne in his well-known thesis on the Cārudatta does not touch upon this point the relevant passages have been quoted in full.

Mṛcch. III. 10. 1 *vṛkṣavāṭikāparisare saṁdhiṁ kṛtvā* (Cārud. III. 5. 1 *vṛkṣavāṭikāpakṣadvāre saṁdhiṁ chittvā*, cf. Kauṭ *dvārasya saṁdhinā*); 11. 1 *tat kasminn uddeśe saṁdhim utpādayāmi*, 12. 3 *atra karmaprārambhe kīdṛśam idānīṁ saṁdhiṁ utpādayāmi* (Cārud. 8. 3 *kīdṛśa idānīṁ saṁdhicchedaḥ kartavyaḥ syāt?*); 12. 3 *caturvidhaḥ saṁdhyupāyo darśitaḥ;* 15. 1 *dhik kaṣṭam! pramāṇasūtraṁ me vismṛtam* (for Cārud. 9. 13 *atha kenedānīṁ saṁdhicchedamārgaḥ sūtrayitavyaḥ syāt?*); 16. 1 f. *ekaloṣṭāvaśeṣo 'yaṁ saṁdhiḥ*, 17. 1 *samāpto 'yaṁ saṁdhiḥ*, (Cārud.

4. The phrase survives in Pali *sandhiṁ chindati*, cf. Pkt. *saṁdhiṁ chettūṇa*, Jacobi, Ausgew. Erzählungen 67. 33.

10. 2 *hanta, avasitam karma*); 18. 8 *bho vaāssa, saṁdhī via dijjadi, coraṁ via pekkhāmi* (Cārud. 9. 6 f. *coro saṁdhiṁ chindadī via pekkhāmi*); 21. 7, 10 *amhāṇaṁ gehe saṁdhiṁ kappia*[5] *coro nikkamadi*, 16 ...... *saṁdhiṁ daïa coro nikkanto* (Cārud. 14. 6. 11, 26 *amhāṇaṁ rukkhavāḍiāpakkhaduvāre saṁdhiṁ chindia coro paviṭṭho*); 21. 21 *aho, darśanīyo 'yaṁ saṁdhiḥ*, 22. 2 *aāṁ saṁdhī duvehiṁ jjeva diṇṇo bhave;* stanza 30 *saṁdhiḥ kriyatāṁ susaṁhataḥ* ("fill up the opening").

Some additional passages are probably based on the same acceptation. In stanza 12 *bhittīnāṁ ca na darśanāntaragataḥ saṁdhiḥ karālo bhavet* Śūdraka may have taken the word in the sense of "hole", although Cārud. st. 8 *bhittīnāṁ kva nu darśitāntarasukhaḥ saṁdhiḥ karālo bhavet* admits of the interpretation "where will the joinery of the wall be cleft so as to show a pleasant passage" (but *sukha-* may be corrupt, as Morgenstierne supposes). Stanza 17b (*śikhā pradīpasya*) ...... *mahītale saṁdhimukhena nirgatā* is clear as far as Śūdraka's idiom is concerned.[6]

Only in the verbal noun denoting the action of making a hole Śūdraka maintains the older terminology. The title of the third Act is *saṁdhicchedaḥ* and in stanza 23d we read *saṁdhicchedanakhinna eva.* Since it is possible that Śūdraka had a more complete text of the Cārudatta in hands than the Trivandrum edition contains, any conjecture in explanation of these terms would be vain.

3. Whether Śūdraka has inaugurated the literary employment of the term *saṁdhi-* cannot be decided. It should be noted, however, that in the Mṛcchakaṭika the term is used not only by the thief in his monologues but also by the hero Cārudatta (cf. *darśanīyo 'yaṁ saṁdhiḥ*). If ever the word has belonged to slang, this was apparently forgotten at the time of the Mṛcchakaṭika, when it must have been current.

It is possible, therefore, that this terminology may throw some light on the problem of the relative chronology of Daśakumāra-

5. I refrain from discussing the use of the Pkt. verb in this passage.

6. The occurrence of the same word in Theragāthā 786 *coro yathā sandhimukhe gahīto sakammunā haññati pāpadhammo* raises problems which cannot be discussed here. Cf. also Dīghanikāya XVI. 1. 17 (*na passeya*) *pākārasandhiṁ vā pākāravivaraṁ vā* (= Aṅguttara Nikāya XCV., vol. V, p. 195).

carita and Mṛcchakaṭikā. In view of the close parallelism that exists between the list of implements of the thief Apahāravarman in the Daśakumāracarita, and that of Śarvilaka in the Mṛcchakaṭikā, it is interesting to note that with regard to the term *saṁdhi-* the Daśakumāracarita goes with the earlier works, such as the Cārudatta. Daṇḍin still writes *kasya cil lubdheśvarasya gṛhe saṁdhiṁ chittvā* 48. 16 ed. Agashe, which is a strict parallel to *vṛksavāṭikāpakṣadvāre saṁdhiṁ chittvā* of the Cārudatta. For "breach, hole" Daṇḍin uses such terms as *bhittirandhra (patha)*- 90. 12, *bila (patha)*- 90. 10, *bila-* 143. 3 & 4, *suraṅgā-* 61. 1; 64. 9; 88. 20 (here synonymous with *bilapatha-* 90. 10, similarly Bhāratamañjarī I. 747: 753, and cf. *suruṅgā-* = *saṁdhi-* in Kathās. 64. 54: 64. 44, *antarbhittisuraṅgā-* Mudrār. II. 15. 74 etc.). It is true, the Mṛcchakaṭikā is known to contain, beside very antique terms[7] also several southern colloquial words.[8] However, even if *saṁdhi-* should originally have been a regional term only, the fact remains that Daṇḍin too is supposed to have been, like Śūdraka, a native of Southern India (see Agashe, Introduction, p. LXV). On account of the terminological difference between both authors, therefore, the Daśakumāracarita may have been anterior to the Mṛcchakaṭikā.

7. See Gawroński, Kuhn's Zeitschr. 44, 241 ff., and Studies about the Skt. Buddh. Literature 14 f. (about *karmānta-*).

8. Among these we may probably reckon *kapotapālikā-* for *viṭanka-* "excrescence from a building shaped like a dove-cot", for which word the commentator Pṛthvīdhara (ad 51. 2), quotes from an old commentary the following gloss, *"uparigṛhaśreṇī'ti, dakṣiṇāpathe lokoktir iyam."* For indications of Śūdraka's southern provenance see, e.g., Karmarkar, New Ind. Ant., 2, 83. Cf. also Pischel, Introduction to Śṛṅgāratilaka, p. 20.

XIII

DIACHRONISTIC LINGUISTICS IN ANCIENT INDIA*

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There are two ways of treating linguistic phenomena: one is the static approach viewing the phenomena as being in equilibrium, and the other is the dynamic approach taking language to be always in a state of flux, and trying to study the changes in form and content of various elements in the course of their evolution. The ancient writers on language were mainly concerned with the descriptive approach; it was in the nineteenth century that the historical and comparative methods in the study of languages became popular. In their enthusiasm for these new methods, many of the scholars forgot the importance of the descriptive approach. Ferdinand de Saussure[1] has made a clear distinction between these two basically different methods of approach. He called them the *synchronistic* or descriptive, and the *diachronistic* or historical methods. The former is concerned with systems, the latter with single units. The historical method has to rely on the available data which are usually meagre, and cannot penetrate beyond a certain stage without the help of the comparative method. In the synchronistic approach the language structure is studied as it existed at a particular time; the synchronistic study of various *etat de langue* will be useful in the diachronistic study of the evolution of a language.

Ancient Indian scholars did not pay serious attention to the problems of diachronistic linguistics; they were only concerned with the synchronistic approach. This applies both to their study of phonology and to that of semantics. Even the greatest of Indian

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1. *Cours de linguistique Generale.*

grammarians, Pāṇini, was interested only in describing the language as he saw it. He may be described as the founder of 'structural linguistics.' It is true that Pāṇini distinguishes the Vedic Sanskrit from the Classical Sanskrit language; but he does not treat the changes that came in the structure of language in the course of its development from the Vedic to the Classical stage; he gives a thoroughly accurate description of the Classical language, and points out the peculiarities of the ancient Vedic language. It may be considered as the description of the two *etat de langue.*

The lack of interest in diachronistic approach on the part of the ancient Indian scholars is quite apparent in the case of semantics. Even from the time of Yāska, the aim of etymology in India has not been to find out the origin and history of words, but to understand the essence or their real significance. Here etymology was not a subject of mere antiquarian interest, but has been of great importance to the study of meaning.

An interesting problem regarding the exact nature of homonyms is discussed by the Indian Grammarians: are we to consider them as the same word with different senses, or as different words with the same sense?[2] Both the views are discussed by Bhartṛhari; but only from the synchronistic point of view. He could not distinguish clearly the two types of such occurrences from each other—those arising through divergent sense development, and those arising through convergent sound development. Such a distinction is easy in a historical, diachronistic, study of language. It is true that this distinction does not exist synchronistically. As Jesperson says:[3] "The psychological effect of these cases of polysemy where one and the same word has many meanings is exactly the same as that of those cases where two or three words of different origin have accidently become homophones." It is to the credit of Bhartṛhari that he was able to distinguish between homophones and homonyms, even in a synchronistic study of language.

The Indian scholars studied the problem of shifts in application under metaphor or *lakṣaṇā*. But even the change of meaning

2. Dr K. Kunjunni Raja, *Indian Theories on Homophones and Homonyms,* Adyar Library Bulletin, 1955, Vol. II.

3. Jesperson, *Linguistica,* p. 405.

is studied mainly from the synchronistic point of view, unlike the study of the change of meaning in the west. It is only in the study of the faded metaphors, or *nirūḍha-lakṣaṇā,* which are instances of extension of meaning and of the *yoga-rūḍha* words which are examples of the law of specialization in meaning, that we find some sort of a diachronistic approach. The original etymological sense is discernable in both cases, but has changed in popular usage. Thus *paṅkaja* (mud-born) is not applied to all things that grow in mud, but is restricted to the lotus. So also the word *kuśala* (one who cuts grass) is used not only to denote one who is good at cutting grass, but in the sense of an expert. Of course we are not certain that these words were at any time used in the etymological sense.

The Mīmāṃsakas admit that just as the corrupt forms (*apabhraṁśa*) of a word may become popular through usage, the corrupt meanings may also become well-known, as in the case of *pīlu* for elephant.[4] The word means a kind of tree in Āryan usage, but it means an elephant to the Mlecchas. Here the Āryan usage is considered as the original and correct one, and the Mleccha usage its corruption. The Mīmāṃsakas do not admit that such meanings have a reality independent of the correct meaning. Of course in the case of well-known synonyms like *hasta, pāṇi* and *kara* for the hand, they have to admit that all the words are correct; and in the case of words like *akṣa* all the different meanings have to be admitted to be primary.[5]

Śabara says that in the case of equivocal words like *yava, vetasa* and *varāha* which had one set of meanings according to the usage of some, and quite a different set of meanings according to some others, the exact meanings intended in the Vedic texts by these terms have to be understood from contextual factors.[6] Kumārilabhaṭṭa finds fault with Śabara for giving these examples. He says[7] that these words are not at all equivocal, since only the

4. *Tantravārttika,* p. 219.
5. *Ibid.,* p. 217.
6. See *Śabarabhāṣya,* p. 216.

केचिद् दीर्घशूकेषु यबशब्दं प्रयुञ्जते केचित् प्रियङ्गुषु। वराहशब्दः केचित सूकेर केचित् कृष्ण शकुनौ। वेतसशब्दं केचिद्वञ्चुलके केचिज्जम्ब्वाम्। तत्रोभयधा पदार्थोपगमाद् विकल्पः।

7. *Tantravārttika* to the *Śabarabhāṣya,* p. 218.

former set of meanings are known for these words. Why should we assume that these words are equivocal and have two sets of meanings?

नैवोच्यन्ते क्वचिद्देशे यवश्रुत्या प्रियङ्गवः ।
जम्बूं न वेतसं प्राहुर्वराहं नापि वायसम् ।
अध्यारोप्य विचारेण किं मुधा खिद्यते मनः ।

This criticism clearly shows that at the time of Śabara both the sets of meanings were known for these words; but that by the time of Kumārila the latter set of senses had become completely obsolete and unknown. Otherwise there is no sense in Kumārila-bhaṭṭa's criticism of Śabara for taking hypothetical cases. It also shows that Kumārilabhaṭṭa did not care to look at the problem from the diachronistic point of view.

XIV

INDIAN PHILOSOPHY

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I

Indian philosophy is at least as old as the *Ṛg-veda* whose date is still indefinite. In extent, it covers not only India but also a large portion of Asia and many land-areas of the Indian Ocean. In content, it is rich and varied including such contrasted standpoints as those of materialism and spiritualism, pluralism and monism, realism and idealism, theism and absolutism. It is not possible, therefore, to characterize Indian philosophy in a rough and ready fashion; what may be true of one aspect of it may not be true of other aspects; what may justifiably be asserted of a stage in its development may not be so asserted of other stages. Many of the critics of Indian philosophy thus go wrong in their summary pronouncements regarding the object of their criticisms. When they say that Indian philosophy is indistinguishable from religion, or that it takes a gloomy view of life and things, or that it is otherworldly, or unprogressive, etc, they mistake what is only a part for the whole of Indian philosophy. Even as Western philosophy is not one philosophy, Indian philosophy is not a single philosophy. Even as it may be legitimately said that there has been a development of thought in the West, it may be rightly claimed that there has been a movement in the realm of Indian metaphysics. So long has the world believed in the myth of Oriental staticity, that the sooner the myth is given up the better it will be for an East-West understanding. Thanks to the coming of the West to India, there is in this country a fairly intimate acquaintance with the major thought-systems of Europe. But there has not been a corresponding appreciation on the part of the West of the significance of Indian philosophy. For more than a hundred years the Orientalists of the West, it is true, have been studying Sanskrit. But a major part of this study has been linguistic and philological. The discovery of Indian philosophy by the West is quite recent. There

is urgent need for the philosophies of India to be better known in the West. It is knowledge that will dispel ignorance and ignorance-bred prejudices. If there should be one world—as there must be—the achievements of India for over five thousand years in the sphere of thought ought to be integrated with those of the rest of the world. Only then will there be a fair chance of global thinking which is what mankind must increasingly strive after.

The first thing one should be aware of in connection with Indian philosophy is its complex nature. The various shades of philosophy appear in Indian thought many times over. Several types of realism and idealism, for instance, arose in Buddhism of the heterodox tradition, and in Vedānta of the orthodox tradition. It is usual to classify the schools of Indian philosophy into two groups, the orthodox and the heterodox. These names, however, are relative, for what is orthodox to one may be heterodox to another. As applied to the schools of Indian philosophy, 'orthodox' means 'acceptance of the authority of the Veda' and 'heterodox' indicates 'non-acceptance of that authority'. Very often the distinction between the orthodox and the heterodox is nominal. Many of the so-called orthodox schools accept the Vedic authority only in name. And, some of those schools which are called heterodox are profoundly influenced by the Upaniṣads which constitute the concluding portions of the Veda. The orthodox systems are usually numbered as six, and the heterodox systems as three. Nyāya, Vaiśeṣika, Sāṅkhya, Yoga, Mīmāṁsā and Vedāntā are the orthodox systems; Cārvāka, Jainism and Buddhism are the heterodox systems. These are only broad divisions of Indian philosophy, and are by no means exhaustive. Philosophy in India did not begin with these systems. For a long stretch of time before the rise of the systems, there was intense philosophic activity. The poets of the Vedas, the seers of the Upaniṣads, the sages who composed the Epics and the Purāṇas, and other thinkers, conformist as well as non-conformist, whose names are legion—all contributed in the early millennia of Indian history to the growth of a rich philosophical heritage. In this heritage the various metaphysical schools that appeared later share many things in common, the only exception being the Cārvāka materialism. This exception itself is indicative of an important feature of Indian philosophy as a whole. And that is, that there is something in the Indian climate of thought

which is not hospitable to the growth of materialism and naturalism. Cārvāka was never a popular system; it can hardly be styled a system. There was no concerted attempt on the part of any group to stifle it. From the evidence available we can say that the Cārvāka had great freedom in the matter of its opinions and their propagation. Yet no strong school could be built for it. There is not even a single book extant expounding it. The Cārvāka materialism is to be regarded more as a mood of the mind in its evolution than as the mind's resting place. Barring Cārvāka, all the other schools of thought, both orthodox and heterodox, reveal certain fundamental identities inspite of doctrinal divergences. It is in virtue of these identities that they may be called Indian. I shall refer to three areas where such identities may be discerned, viz., methodology, metaphysics and practical teaching.

The modern Western philosopher is suspicious of any method other than that of reason. A well-known European thinker defines philosophy as a thinking consideration of things. Very rarely has the philosopher in the West recognized the limitations of the intellect. In India, however, it was very early realized that the total reality which is the content of philosophy cannot be adequately known through intellection. Analysis is the main function of the intellect. But by cold analysis we shall not be able to experience the living reality. Logical reasoning can yield only mediate knowledge. The aim of philosophy is not to stop with a theoretic understanding of the real but to have an immediate awareness of it. And so, a method which is higher than reasoning and takes the thread where the latter drops it is necessary. That method is usually referred to as that of intuition. There are several Indian names for it: *ārṣa-jñāna, prajñāna, kevala-jñāna, anubhūti,* etc. The knowledge that one gets through intuition is immediate and indubitable. It is not infra-rational but supra-rational. It is self-certifying and self-established. Not only do the systems directly based on the Upaniṣads adopt this method, but also the rationalistic schools such as Nyāya and Bauddha feel the need for it. The very fact that this is so shows that intuition cannot be an irrational instrument of knowledge. The Indian philosopher does admit that the intuitive experience of reality must be made intelligible. And, this is the especial function of reasoning. What is more cannot be less. What goes beyond reason cannot fail to satisfy the demands of reason. Logical inquiry is certainly of great conse-

quence. As Śaṅkara observes, that which is accepted or believed in without sufficient inquiry is not only bad philosophy, but also prevents one from reaching the goal of perfection and results in evil. So, there must be intelligent inquiry; but the philosopher's ultimate objective is not mediate knowledge of reality; it is the immediate experience thereof.

In the area of metaphysics, the most prominent doctrine that one finds in every system of philosophy is the distinction between spirit and matter. Various terms are used in the different systems of philosophy to indicate these two categories: *ātman* and *anātman*, *jīva* and *ajīva*, *puruṣa* and *prakṛti*, etc. What distinguishes spirit from matter is consciousness, *caitanya*. Even Buddhism, which dismisses the self in the sense of an abiding entity, recognizes a sort of fluid self which transmigrates and finally attains *nirvāṇa*. The spirit or self is not to be identified with the mind. The mind, according to all the systems of thought, is a material and not a spiritual principle. The self is different from the mind-body complex which it occupies during transmigration. The mind is only an instrument of knowledge, and is not of the nature of knowledge which the self alone is. Of the two categories, spirit and matter, the more primary is the spirit. Even in an out-and-out dualistic system like the Sāṅkhya, the evolution of *prakṛti* is said to be for the sake of the *puruṣa*. In Jainism, for instance, the very terminology of the classification of reality into *jīva* and *ajīva* shows the importance of the spiritual principle. There will be no drama of the universe, if its hero, the spirit, is removed. But for the principle of consciousness, as it is stated in many a philosophical work, the entire world will be blind.

Another metaphysical tendency that is to be observed in Indian philosophy is the strong urge towards the unification of reality. That the fundamental reality is one or non-dual, and that it is of the nature of the unconditioned spirit is the teaching of many a system of philosophy, and the implication of several others. It is true that there are pluralistic schools. But even they make a distinction between the independent reality and dependent realities. The former is one and is spiritual by nature. Some philosophers call it God, others the absolute Experience. The many finite realities are dependent on the one infinite reality. They are related to it either as modifications or as appearances. The final reality is not only the supreme ground of existence, it is also the

ultimate value. It may be described as truth, beauty, and goodness. But here again it must be remembered that the ultimate value is one, and not many. The spirit as freedom is the supreme value; in it are synthesized and transmuted even truth, beauty, and goodness.

We have already seen that the aim of Indian philosophy is not a mere intellectual apprehension of reality but an intuitive realization of it. And so it is that insistence is laid in every system of philosophy on the need for practical discipline. An aspirant for philosophic wisdom should be not only intellectually alert but also morally pure. Metaphysical contemplation is possible only for one who has cultivated such qualities as equanimity, self-control, and contentment. All the schools of philosophy, orthodox, as well as heterodox, are agreed on this, viz., that a seeker after metaphysical truth should cease from harbouring a thirst for the fleeting goods of this world, and turn to the eternal reality for ultimate succour and satisfaction. When a candidate is morally and emotionally ready, he enters on the enterprise called philosophizing. Guided study, rational reflection, and continued meditation on content studied and reflected upon constitute the technique of philosophizing in India. This process has to go on till the metaphysical truth is realized. That such realization can come to one even in this very life is the teaching of many schools of Indian philosophy. Even those others which believe that the final realization comes only after death do nevertheless teach that he who has received philosophic knowledge leads thenceforward a transformed life.

II

The integration of the new with the old has been the technique by which Indian philosophy has grown. In the struggle of ideas there is no vanquishment for any. Some ideas become dominant not on the dead selves of the others but by absorbing them and thereby becoming richer. If the doctrines of Vedānta have become the ruling concepts of Indian philosophy, it is because of their spirit of accommodation and readiness to absorb. The seeds of Vedānta may be traced to the earliest Vedic literature of India. But to their growth and evolution all the various philosophical traditions of India have contributed. From the Nyāya system has come the

method of logical argumentation; from the Vaiśeṣika the skill in defining categories; from the Sāṅkhya the doctrine of Nature and its evolution; from the Yoga the discipline of mental concentration; and from the Mīmāṁsā the canons of interpretation. Even the so-called heterodox schools have influenced the progress of the systems of Vedānta. If Vedānta seeks to justify its assertions about reality, if it takes pains to exhibit the *rationale* of its beliefs, it is not a little due to the criticisms it had to meet from unorthodox quarters. Vedānta, therefore, has become a synonym, in India, for philosophy. The term means 'the wisdom-end.' It is thus significant that philosophy whose end is wisdom should be called Vedānta.

The name 'Vedānta' properly belongs to the Upaniṣads which are the concluding portions of the Veda, and its aim as well. The Sanskrit word *anta,* like the English *end,* means both termination and purport. The importance of the Upaniṣads for Indian philosophy is universally acknowledged. In the Upaniṣads we have the early beginnings of philosophic thinking in India, the springs of metaphysical ideas. It must have been a wonderful age when sages like Yājñavalkya and Uddālaka and kings like Janaka and Ajātaśatru lived and discussed ultimate problems in forest-hermitages and royal courts, at community-gatherings and in private households. The Upaniṣads record these discussions, without seeking to systematize them. The task of bringing order into their teachings was accomplished by great thinkers in the subsequent ages; and it was they that founded the schools of Vedānta. The fact that there have emerged different philosophical persuasions, all based on the same scriptures, shows that the sponsors thereof were not mere interpreters of texts but constructive metaphysicians. The doctrines of Vedānta are the results of the critical light of reason playing upon the deep spiritual experiences of the *ṛṣis.* Revelation and reasoning are thus complementary methods in the discovery and explication of the philosophic truth. The final appeal is to the ultimate experience that comes to everyone that undertakes the journey and is prepared for the hazards and hardships that are inevitable. It will be thus seen that there is little of dogmatism in the methodology of Vedānta. Divergent philosophical perspectives such as realism, theism, and absolutism, find their legitimate places in Vedānta. The hope and promise of every Vedāntic school is that, if an aspirant goes through the prescribed

disciplines, he is bound to see the dawn of the plenary truth which will dispel all his doubts and free him from all the fetters of finitude.

The principal schools of Vedānta are three, viz. Dvaita, Viśiṣṭādvaita, and Advaita, associated respectively with the names of Madhva, Rāmānuja, and Śaṅkara. These philosophers, it must be remembered, were not initiators of the schools; we must regard them only as the best known consolidators of the Vedāntic doctrines. The roots of the dualism of Madhva, the non-dualism of the qualified of Rāmānuja, and the non-dualism of Śaṅkara are to be traced to the Vedas and Upaniṣads. The Upaniṣads, as we have already seen, are the basic source of Vedānta. Besides the Upaniṣads, the *Bhagavad-gītā* and Bādarāyaṇa's *Vedānta-sūtra* are considered to be the canonical texts of Vedānta. The teachers of the Vedāntic schools build their systems on the foundation provided by the triple canon (*prasthānatraya*). This, however, does not mean that there is no freedom for the inquiring reason. The very fact that varying systems have been built on the support of the same authorities shows that the philosophic reason has been actively at work.

Madhva who lived in the thirteenth century A.D. taught Dvaita-Vedānta which stands for a vigorous theistic-pluralistic-realism. The souls are different from one another as well as from God and the world; and God is different from the world. Thus difference, according to Madhva, is the very essence of individuals; and there is an infinite plurality of individuals. Experiencing makes no difference to the facts experienced. The existence of objects is quite apart from knowledge. Pluralism and realism, it would thus seem, cannot go farther than Dvaita. Yet, this system is not pluralistic and realistic in the ordinary sense of those terms. For Madhva holds that there is only one independent entity, and that is God. All the other realities, both spiritual and material, are dependent on him. Also, on the side of matter, there is one primal source which is *prakṛti*, from which the many material things are derived.

God is the supreme reality, according to Dvaita. He is only the efficient cause of the world, and not its material cause. He transcends the *guṇas* of *prakṛti*, and is a personal deity. He creates, controls, and destroys the world. He is of the essence of consciousness and bliss, and has all auspicious attributes such as infinite power and infinite mercy. The world-creation is but a

manifestation of God's perfection. It also affords the souls an opportunity for self-realization through self-discipline. What the souls have to realize is their dependence on God and their difference from him. It is true that they are also characterized by consciousness and bliss. But these features are not so perfect in them as in God. Even in the state of release there are gradations in excellence among the souls. And, the destiny of all of them is not the same. Some of them succeed in achieving the goal of release from bondage; others have to eternally revolve, being bound to the wheel of transmigration; yet others are destined to go to hell and languish in travail for ever there. Release is achieved through a knowledge of God and an intense love of him. The soul's love of God leads to the showering of God's grace upon the soul, which is the immediate cause of salvation.

Rāmānuja who belonged to the twelfth century A.D., expounded a view of Vedānta which is known as Viśiṣṭādvaita. Reality, according to this philosopher, is one or non-dual; but it is not a distinctionless homogeneous unity. God, souls, and the world are not separate realities. Each higher reality is related to its subordinate reality as substance to attribute, or as soul to body. This unique relation is termed by Rāmānuja *apṛthak-siddhi* which means 'inseparability'. God is related to the souls and the world of matter as their substance and self; these latter cannot exist without him, and cannot be known independently of him. In this sense, then, reality, is one: it is the one God who is the central principle of both the individual soul and the physical world. There is nothing outside God; all distinctions are only within him. He is not only the efficient cause of the universe; he is the material cause as well. He is the whole and the sole ground of the universe. He is self-existent, whereas matter and souls exist for his sake. He is the home of all auspicious qualities. Although he is the author of the world, its change and suffering do not affect him. He is, and has intelligence. It is through this latter attributive intelligence which is called *dharma-bhūta-jñāna* that God knows objects and controls them.

The soul too has a nature similar to that of God. But only it is imperfect, and is an accessory to God. God is immanent in the soul, acts upon it, and guides it from within. The destiny of the soul is the attainment of the World of God. The soul reaches

its goal through devotion (*bhakti*) and self-surrender (*prapatti*) to God.

Both Madhva and Rāmānuja were followers of the Vaiṣṇava tradition. There are other Vaiṣṇava schools which are akin to either Dvaita or Viśiṣṭādvaita. The Śaiva and Śākta disciplines also fall within one or the other of these philosophical types. What is common to all of them is that they are theistic philosophies. The highest reality, they are agreed, is God conceived of as the most perfect person, *puruṣottama*.

Śaṅkara, whose date is believed to be A.D. 788-820, opted for the absolutism of the Upaniṣads. He was convinced that a personalistic conception of the ultimate reality was not the final view. However far the refinement of that conception may go, it would not be free from the exigencies of limitation. The idea of a person cannot be that of the total reality. Also, that reality cannot be many or a one involving distinctions. A one-among-many or a one-in-many can only be a limited or finite reality. It cannot be held either that there is no unlimited reality at all; for to be aware of limitation is to go beyond it. The ultimate reality which the Upaniṣads refer to by such terms as *Brahman* and *Ātman* is the non-dual spirit. There is no reality other than it. Nor is there any distinction within it. It is of the nature of absolute being-consciousness-bliss. It is not possible to define *Brahman* as 'this' or as 'that'; for all such definition would only result in limiting *Brahman*. Hence, the Upaniṣads indicate its nature by adopting the negative mode of saying that it is *not this, not that.*

The pluralistic universe is, no doubt, experienced by us who imagine ourselves to be discrete individuals. But this experienced plurality is like unto the multiplicity of dream-contents. In dream it is the one mind that appears as the many experiencing individuals and experienced objects. The world of waking is similar to the dream-world. The one self appears as many. The non-dual consciousness apparently divides itself into the cognizing subject, the cognized object, and the cognitive process. The power that makes for this apparent division is called *māyā*. We cannot explain how the one ever comes to seem as many. This is inexplicable. But when one wakes from the cosmic delusion, one realizes one's identity with the Absolute. The soul's non-difference from *Brahman* is the truth that has to be realized. When

that is realized, the soul is no longer caught in the mesh of *māyā*. Self-realization, according to Advaita, is the perfect freedom. One can get it *here* and *now*. In truth, it is not a new acquisition. It is the realization of what has eternally been there. The absolute spirit is us. On account of ignorance, we have forgotten this timeless truth. When through proper spiritual training and inquiry we get rid of ignorance, we regain our eternal freedom as the non-dual spirit. This is Advaita.

All that is best and noblest in Indian philosophy is to be found in Vedānta. Glorious as has been the past history of Vedānta, the present indications are that it will have a brilliant future. Due to the impact of Western thought, many a contemporary philosopher of India is re-thinking the Vedāntic doctrines in constructive ways. Fortunately, there have been even in recent times seers of great magnitude who were the exemplars of the Vedāntic experience and the Vedāntic way of life. With the advantages that political freedom has brought with it to India, one may legitimately expect a new flowering of Indian thought.

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XV

ARCHAEOLOGY IN SOUTH INDIA

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The increasing recognition that archaeology is receiving as a specialised branch of study in our University affords a good opportunity for one to review the present position of archaeological studies in South India and consider the lines of archaeological work that may be done in the years to come.

Archaeology is a branch of human science that deals with the material remains that ancient man has left behind. The word itself is derived from two Greek words, *archios* meaning ancient and *logos* meaning knowledge. There is no need to be apologetic for paying adequate attention for the study of South Indian archaeology on account of the wealth of archaeological material in it. Probably, it is no exaggeration to say that South India is something of an open-air archaeological museum with many remains and monuments, some of which are buried underneath the earth while some others are just peeping out as it were to draw our attention to their antiquity and forlorn condition.

Though, thanks to the enthusiasm of an Orientalist like Sir William Jones, a Society was founded at Calcutta so early as 1784 with the object of enquiring among other things 'into the History ...... the Antiquities, Arts, Sciences and Literatures of Asia' and an increasing interest was evinced by some European scholars in them since then, practically nothing was done for the rescue and study of ancient monuments in South India, except for certain individual antiquarian enthusiasts who took a fancy for the study of some outstanding monuments in the region like those at Mahābalipuram. Among them were Chambers (1788), Goldingham (1798), Babington (1828) and Braddock (1840) and Colonel Colin Mackenzie, the Surveyor-General of India, who was able to collect in spite of heavy odds a number of manuscripts and inscriptions and make some useful drawings of monuments at

the place. Not only was there generally no interest evinced in the archaeological wealth of South India, but many monuments were pulled down for one reason or another. The way in which the stone *gopura* of the great temple at Gaṅgaikoṇḍacōḷapuram in the Tiruchirappalli district was blasted with gun powder and its compound walls along with the splendid granite sculptures that adorned the temple were dismantled to obtain materials for the construction of the large masonry dam at Lower Anicut six miles from the place may be cited as an example to illustrate the callous indifference and wanton vandalism of the Government towards them.

During the Viceroyalty of Lord Canning the Archaeological Survey of India was started in 1862 with Alexander Cunningham as the Archaeological Surveyor of India, his duties being, 'to make an accurate description of such remains as most deserve notice, with the history of them so far as is traceable and a record of the traditions that are retained regarding them'. Between 1862 and 1865 Cunningham's work covered a part of North India only. Though the post was retrenched in 1866, it was revived in 1871 during the Viceroyalty of Lord Mayo under the new name of Director-General of the Archaeological Survey of India. Cunningham was appointed to the place, his duties being 'to superintend a complete search over the whole country and a systematic record and description of all architectural and other remains that are remarkable alike for their antiquity or their beauty or their historic interest'. He had three Assistants under him. They were able to collect a large volume of historical and geographical data and prepare plans of important monuments; but all their activities were confined only to North India. It was in 1874 that the attention of the Survey was extended over Western India with the appointment of Dr. James Burgess as Archaeological Surveyor and Reporter to Government for that region.

In 1881 an Archaeological Survey for South India was constituted and amalgamated with that of Western India and placed under the charge of Dr. Burgess. A little earlier Robert Sewell of the Provincial Civil Service had been asked to compile, among others, a basic list of all the antiquarian remains in the Madras Presidency; and that formed the basis of the work of Burgess. With the appointment of Alexander Rea as his Assistant in 1882, the Madurai District, Mahābalipuram, Kāñcīpuram and Hampi

were surveyed in the next few years. In 1899 the Archaeological Survey of India was reorganised, and Madras along with Coorg was made one Survey circle. As in the other four, the Madras Survey circle was required to devote itself to conservation work, excavation being considered by the Government as of secondary importance, though in course of time it came to be recognised more and more that it was 'in exploration and study of purely Indian remains in the probing of archaic mounds, in the excavation of old Indian cities and in the copying and reading of ancient inscriptions that a good deal of the ...... work of the archaeologists will in future live'. Epigraphy also began to receive attention from 1885. During this period the jurisdiction of the Surveyors was extended over the Indian States also. From the commencement of the present century the Archaeological Survey of India became a permanent Department of the Government of India.

The main duties of any archaeological department are exploration and excavation, conservation and research and collection and publication of inscriptions. The archaeological work in South India may be reviewed under these heads.

So early as 1863 Robert Bruce Foote of the Geological Survey of India, a pioneer in the field of pre-history discovered the first palaeolith among the debris of a pit in the laterite gravel near Pallāvaram, Madras and later a number of similar artefacts in the gravel bed of the Kortalayār river at Atrampākkam, Nārāyaṇavaram and Vaḍamadurai. They were classified only from the point of view of their typology. But with the help of a further collection of lithic tools from the Kṛṣṇā basin and the region round about Madras fresh light was thrown on the early Stone Ages and palaeolithic sequence including the upper palaeolithic 'blade and barin' industry in South India by Commiade and Burkitt who associated them with the climatic and geological changes in the area. Later the Yale-Cambridge expedition led by H. De Terra which set itself to a study of the correlation of the palaeolithic industries confined itself to North India though it felt that the pluvial cycles in South India could be related to the glaciations in North India. In recent years though fresh material has been collected regarding the palaeolithic man in South India particularly in the Kurnool area and the Godāvarī valley, it is still difficult to trace his history or describe his culture individually or in relation to that of men of his age either in the other parts of India or in other countries.

Prehistory is still the most undeveloped of all the branches of Indian archaeology. And much of our evidence on the subject is mainly based on typology. Unless we can establish a stratigraphic basis for the succession of Stone Age cultures our knowledge of them will be limited though we may try to present a plausible chronology. The subject is as difficult as it is interesting.

Though there was no definite 'hiatus' between the palaeolithic and neolithic ages, the mesolithic complex may be considered to occupy an intermediate position between them. An important characteristic of this culture was the large use of microliths. They have a wide, continuous and varigated distribution in India; and in South India they are found in large numbers in the region round Sawyerpuram and Tuticorin besides Ramnad embedded in the fossil sand-dunes (*teris*) turned red on account of intensive weathering. They seem to be of considerable antiquity and it is 'more or less likely that the implements were made here only at the time when the basal level of the *teri* was being laid down'. Their connection with the pre-neolithic stone industries in Ramnad and Pudukkōṭṭai where a good number of flake and blade tools have been found has to be examined. Microliths appear to have been in use in neolithic and chalcolithic times as may be seen from their find at some places like Brahmagiri and Maski in South India along with polished stone axes, pounders and discs and pottery of dull grey colour.

Neoliths have been found in large numbers in the districts of Chingleput, North Arcot, Salem, Tanjore, Tiruchirappalli and Tirunelvēli in the Madras State, Warangal and Anantapur in Andhra Pradesh and Bellary, Raichūr, Bangalore and Chidaldrug in Mysore. The neolithic implements from Sanganakallu (Bellary District) seem to have been very early when compared with similar ones from other neolithic sites. The excavations at Brahmagiri made in 1947 reveal the use of copper and bronze though only to a limited extent.

The transition from the neolithic to the chalcolithic and iron ages in South India was not so obscure. From the days of Robert Bruce Foote and Rea a lot of material bearing on the chalcolithic and iron ages in South India has been collected. One of the early sites that revealed this culture is Ādichchanallūr in the Tāmraparaṇī valley. Dr. Jagor visited the place in 1876 and collected a number of things for the Berlin Museum. Between 1899 and 1905

Alexander Rea exposed a number of pre-historic burials at the place. Intensive exploration was made at the site also by Louis Lapicque of Paris. The excavations exposed a number of funeral urns in rows placed in pits of size dug in the hard rocky soil. They contained complete human skeleton or selection of bones, sometimes along with iron implements and weapons, funerary vessels, bronze lids with animal representations and personal ornaments of gold and bronze. Rea explored and excavated some other sites which revealed almost the same culture. Among them was Perumbair in the Chingleput District. Breeks has described a number of rude stone monuments in the Nilgiris. Among other sites of a similar nature that were examined are Kaniyampūṇḍi and Śirumugai in the Coimbatore district.

Though Sewell had suggested a systematic exploration of all South India to find out more evidence on the problem of urn burials and 'megaliths' much was not done until about a decade ago when the Archaeological Survey of India undertook the work. The Prehistorian of the Department made an intensive survey for such sites in the district of Chingleput and its adjoining ones, namely North Arcot, South Arcot and Chittore. The Chingleput district itself revealed the existence of more than 200 such sites. Besides, the Pudukkōṭṭai area as also Cochin were explored. A few sites in the Chingleput district namely, Śāṇūr, Amṛtamangalam and Kunnattūr and one site Śengamēḍu in the South Arcot district were excavated. In the Chingleput district two main megalithic types have been found, namely cairn circles and dolminoid cists, the former usually being a burial chamber made of stones both for the sides and the cap, the whole surrounded by a single or double stone circle and the latter being a cairn with one or more urns or a legged terracotta sarcophagus underneath and surrounded by a stone circle though there were minor variations in both of them. Some burrows also have been found in the district. The Śengamēḍu excavations have revealed the use of black-and red ware pottery, black rouletted ware, imitation amphora in red local ware besides black-and reddish laid into a pit of size cut for the purpose. In the Pudukkōṭṭai area are found both the cairn and cist type of megalithic monuments. The cist chamber is transepted into two halves by a central vertical slab usually oriented eastward. The sarcophagus internment is not found here. Several varieties of megaliths are found in Cochin, namely dolmenised cists with or without portholes, *kuḍakkallus* (hoodstones), either found single or arranged in groups, *tōpikallus* (umbrella

stones), truncated cones with circular edge resting on four clinostatic slabs, *menhirs* or big stones planted vertically in isolation, and underground caves scooped into the subsoil. Rea describes one such of the last type as follows: "Behind the open space in front, a few feet below, the ground level, there exist recessed entrances with enclosed slabs. There are four or five chambers one within another, in this frame and the slab perfectly fits the outermost. The cells within the caves have cup-like domes....In the centre a cut stone pillar of sufficient strength either circular or square to withstand the weight of the laterite roof is cut". Besides we have urn-burials in Nevasa and Behal in a chalcolithic setting. Slab cist-graves with port-holes are common in Hyderabad and Mysore.

The term 'megalith' refers to a particular type of monument made of stones and having 'sepulchral, ritualistic or commemorative association', the word itself being made of two Greek words, *megas* (great) and *lithos* (stone). In spite of their apparent differences there are some common characteristics for the megalithic monuments. They are usually found on the slopes of hills or rocky outcrops or high ground with an irrigation tank and arable land very near. It is believed therefore that the authors of this culture were a settled people who knew and practised the arts of agriculture and irrigation. From the general nature of the distribution of megalithic sites it appears that the culture which they reveal mainly flourished south of the R. Godāvarī though the possible existence of the culture in north India also is not entirely ruled out.

Though a considerable volume of material was thus collected regarding the pre-and proto-history of South India its chronological sequence could not be easily made out. In spite of its abundance its interrelationship was unknown. "It is (only) a jumble of words with no consecutive meaning"; and any definite chronology in culture sequence could not be gained unless culturally a 'bilingual' site was excavated which would contain evidence of unknown local culture and chronologically ascertained foreign culture. Such a site was Arikamedu, a place near Pondicherry where Sir Mortimer Wheeler conducted excavations in 1945 adopting for the first time in India normal principles of modern archaeological field technique. The excavations at the place are of more than ordinary importance to students of early South Indian history for "by establishing at last the precise chronological position of an

extensive South Indian culture, the archaeologist has provided a new starting point for the study of pre-mediaeval civilizations of the Indian peninsula." The archaeological finds at the place, particularly the pottery wares such as the arretine, amphorae and rouletted black-ware which may be assigned to the first or second centuries A.D. confirm in a large measure the accounts we have of the economic relations of South India with the Western world during the period. Further the potshreds with *graffiti* found at the place considered along with their association with dated antiquities give us an idea of the Tamil language during the period. Thus "for the first time it (Arikamedu) provides a firm datum line from which the classification of pre-mediaeval South Indian cultures can begin."

The plan of 'opening up' the archaeology of South India was further given effect to in 1947 by the large scale and scientific excavation made at Brahmagiri in the Chitaldrug district of the Mysore State. Brahmagiri was a good choice calculated to yield data for the study of the sequence of cultures during the protohistoric period in South Indian history; and it fulfilled the high expectations. The place revealed three phases of culture; firstly, a stone axe-culture which was a chalcolithic culture consisting of two sub-divisions; secondly, a megalithic culture which was essentially an intrusive Iron Age culture similar to the one revealed in a number of other places in South India as seen above charactesised by megalithic tombs and pit circles and thirdly an Andhra culture characterised by the use of russet coloured pottery followed by a few other types, among which was the rouletted ware, all of them interlocked by significant overlaps and thereby indicating the unbroken continuity of cultural evolution till about the third century A.D. Excavations made at a few other places in lower Deccan such as Chandravalli in the Chitaldrug district, and Maski and Pakhihal in the Raichūr district, all in the new Mysore State and Koṇḍāpūr and Amarāvatī respectively in the Madak and Guntur districts in Andhra Pradesh have also yielded articles of a like nature suggesting a sequence of cultures similar to that exposed at Brahmagiri. In most of these places have been found Roman coins of the first century A.D., pointing to the classical influence during the period over at least some urban areas in South India.

Thus from the Arikamedu and Brahmagiri excavations we are able to form some idea about the period of the megalithic culture.

The megalithic culture of the Mediterranean area is usually assigned to the period between 2500 and 1500 B.C. But the find of iron in the South Indian megaliths stands in the way of such an early date being given to it, though one finds considerable structural similarity "seemingly amounting to kinship" between the two. From a study of the Adichchanallūr skulls Zuckerman thought that the authors of the Indian megalithic culture were the ethno-linguistic group of people known as the Dravidians. It is of interest to note in this connection that among the methods of disposal of the dead which one gathers from early Tamil literature are cist and urn burials, the urns themselves being known as *tāḻi*, *mudumakkat-cāḍi* or *īmattāḻi*. On the evidence of the stratified finds at Brahmagiri, Christoph Fürer von Haimendorf thinks that the authors of this culture were the Dravidians who intruded into the Deccan and South India prior to the days of Aśoka, say between 700 and 400 B.C. A significant point to be remembered in this connection is that the Tamil language which developed into literary form in the early centuries of the Christian era flourished as *patois* among the people of the megalithic culture. Since some centuries must have elapsed for proto-Tamil to develop into good Tamil, it deserves to be seriously examined if the beginnings of the megalithic culture could not be pushed a little earlier, say to c. 1000 B.C. In that case the gap between the ages of the megalithic cultures of the Mediterranean area and South India may not be very much. But in questions of this kind one cannot hazard any definite conclusion. For a solution of this question attempt must be made to correlate all available evidence, literary, anthropological and archaeological. The material with us for solving the problem is still inadequate. More data must be collected on the subject. Extensive explorations both in South India and the land space intervening between India and the Mediterranean have to be made followed by intensive excavation and large archaeological material collected and studied for the solution of this most interesting, but baffling problem relating to the cultural sequence in South India, during the centuries before the dawn of the Christian era.

As said above the chalcolithic culture of lower Deccan has been linked with later cultures largely on stratigraphic evidence. Probably, the epigraphical and historical data available in the area has been mainly responsible for such concentrated attention being focussed on it. The existence of a number of Buddhist settlements at places like Nāgārjunakoṇḍa, Jaggayyapeṭa, Sālihuṇḍam,

Guḍivāḍa, Ghaṇṭaśāla and Bhaṭṭiprolu in the Kṛṣṇā and Godāvarī districts has been revealed by the spade of the archaeologist. Excavations at Nāgārjunakoṇḍa done some thirty years ago by Longhurst and Ramachandran and the large scale excavations now being conducted at the place for rescuing archaeological relics from the proposed Nāgārjunasagar have exposed the existence of many *stūpas,* big and small, with *caityas, vihāras* and *maṇḍapas* attached to them. The inscriptions found at the place show that it was under the Ikṣvāku kings who appear to have ruled from a place called Vijayapurī on the right bank of the R. Kṛṣṇā in the Nāgārjunakoṇḍa valley itself during the second and third centuries A.D.

The outstanding problem engaging the attention of the Archaeological Survey in the Tamil country is, as has been said earlier, the megalithic problem. Early historical sites have not so far been well examined. Aśoka mentions in his inscriptions three independent Tamil kingdoms, namely those of the Cōḷas, Pāṇḍyas and Kēraḷaputras (Cēras) besides the Satyaputras who were probably the Adigamāns of Tagaḍūr in the Salem district. With regard to the choice of early historic places for excavation in the Tamil country one has necessarily to depend upon the literary traditions that are available about them in the same way as Col. Schlieman was influenced by the Homeric legends about Troy in his excavations at the place in 1870. We can gather some idea about the early Tamil kingdoms and urban life in them from the Śangam literary works of the early centuries of the Christian era. According to them Uraiyūr a part of the Tiruchirappalli town, and Kāvērippūmpaṭṭinam at the mouth of the R. Kāvērī in the Tanjore district were the Cōḷa capitals; Madurai and Koṛkai were the Pāṇḍyan capitals and Vañji was the Cēra capital.[1] To have a good knowledge about them the literary data has to be correlated with archaeological data. But the location of the sites is not so easy now. Ancient habitation sites in many parts of North India as in many other

1. There is a good deal of difference of opinion among scholars regarding the identification of the Cēra capital, some holding that it was Karūr in the Tiruchirappalli district and some others identifying it with Tiruvañjikkaḷam in the West coast. In the solution of the problem two new inscriptions have also to be taken into account. A Brāhmī inscription near Pugaḷūr in the Karūr taluk mentions one Kōsipaṉ Ātaṉ (*Annual Report of South Indian Epigraphy,* 348 of 1927-28). The word reminds one of Ātaṉ, the name borne by a few Cēra kings. A Cōḷa inscription mentions Karuvūr *alias* Vañjimānagar in the Vēngāḷa nāḍu, a sub-division of Vīra-śōḷa maṇḍalam (335 of 1927-28).

countries have been identified by reason of the mounds which are seen in such places. Some years ago when the river beds of the rivers Sarasvatī and Dṛṣadvatī were explored some one hundred and fifty ancient mounds were plotted. But such mounds are not seen in South India probably because of the fact that it is mainly plain agricultural country not susceptible to high winds leading to the conversion of habitation areas into deserts and resulting in their depopulation. Ancient places have been so continuously occupied that even archaeological surface finds are not traceable in them. Thus it is not known for instance where exactly was the habitation areas in Madurai or Uraiyūr about which we have such glowing descriptions. One has to depend largely on contour maps for the location of such places; but in most cases they are occupied or cultivated areas now. It is said that ancient coastal towns like Kāvērippūmpaṭṭiṇam and Kōṛkai have been partially washed away by the sea. For some distance from the present Kāvērippūmpaṭṭiṇam the sea is shallow with turfs and hence one cannot be sure if the old town was washed away by a tidal wave or the sea receded after having swept the place and converted it into a sandy desert. A solution to this question depends much on geological factors regarding the formation of the coast line in the area. But leaving for the present such doubtful sites, South India has to be explored systematically and deep digging undertaken at chosen sites, if we want to get sufficient data regarding the cultural sequence of the early historic period in South India.

Politically and otherwise the three centuries following the Śangam age in South India is a dark period. The three monarchies of the Tamil country were overwhelmed by a tribe of people known as the Kaḷabhras who came probably from the Karṇāṭaka country. But whatever may be the political fortunes of the area during the period, probably it is not so difficult to form some idea of the structure and sequence of cultures, their general distribution and inter-relationship during the period if vertical excavations are made at select places chosen after intensive exploration. It is true we are able to make some faint outlines of the history of South India from the sixth century onwards thanks to the large number of inscriptions and literary works that have been helpful as source material for the reconstruction of such history. But it must be recognised that our knowledge of the same is still imperfect which can be rectified only by the excavation of historical sites, 'which alone can give us that information which is necessary to recreate a past civilization and to establish its significance in the

general story of human progress'. There are a number of such historical sites in South India among which are Kāñcīpuram, Mahābalipuram, Tanjore, Gaṅgaikoṇḍacōḷapuram, Āyirattaḷi (near Kumbhakōṇam) and Madurai to mention only a few. The importance of such work has been well recognised by the Archaeological Survey of India, and during the last few years some trial excavations have been made at a few select historical sites. Some years ago a trial dig was made by the Department at Pallavamēḍu a mound on the outskirts of Kāñcīpuram which was believed to contain Pallava relics. The excavation revealed successive structural periods the lowest one showing urn internment. Unfortunately no Pallava antiquities were recovered but only large quantities of shell bangles. The habitation area of the Pallava period is to yet to be explored. The surroundings of Gaṅgaikoṇḍacōḷapuram revealed the remains of a big rectangular fortification 'in the trail of what was once a flourishing city'. It also betrayed evidence of a moat surrounded by a wall. There appears to have been also an inner fortification. Near Tanjore traces of an ancient rampart of about four miles length converging towards the western side of the present city have been found. Some trial dig has been made at Hampi. Thus intensive exploration of historical sites in South and regular excavations in them are bound to yield rich archaeological data which may be expected to help filling large gaps in our knowledge of the sequence of cultures in mediaeval South Indian history. Apart from these well-known historical sites there are many others which may have to say something about the ancient past. The names of places like Kambarmēḍu and fields may probably give some indication of their past importance. They have also to be taken into account along with the traditions centering round them for making a list of sites of archaeological value and interest. Much planned exploration has to be done in South India for making such a list; and it is of great interest to note that it is one of the items of the programme of work chalked out for the next five years by the Archaeological Survey of India.

South India occupies an unique place in the history of architecture, sculpture and painting in the country. Though some work has been made on the architectural features of a few monuments in certain parts of South India during certain periods of its history, a scientific and historical account of the origin and evolution of South Indian architecture based on a careful and detailed study of the numerous temples in the area is a hard felt need. The necessity for such a study has been felt for a long time past and

hence recently a "Temple Survey Project" has been organised by the Archaeological Survey of India. India has been divided into two zones, north and south, for that purpose and a good beginning has been made on the work in South India; and one has every reason to expect that our knowledge of the architectural evolution in South India will be enriched in a reasonable time. Some work has been done on sculpture and iconography in South India, but no systematic work on them has yet been made. For a proper study of the same one has to depend on good photographs of all the sculptures and icons in South India as also a good list of literary source material relating to them. The *Śilpa* texts in Sanskrit and the South Indian languages besides the *dhyāna ślokas* on different deities contained in them and inscriptions have to be collected and studied carefully. It is only then that one can form any clear idea of the origin and history of plastic art and art motifs in the region. Likewise a list of all the paintings in South India and the works dealing with the science of painting has to be made before the subject can be studied in detail. A knowledge of the themes dealt with in them is also necessary. Plastic tradition in clay, namely, *terracottas,* in South India also requires study.

As said earlier, one of the main duties of any Archaeological Department is to save for posterity the archaeological wealth of the country from neglect and devastation by human agencies as also the destructive action caused by natural causes like growth of vegetation on them, penetration of salt laden air into the surface of rock cut masonry or brick monuments near the sea, and the presence of saltpetre in the soil which wears them out. But conservation of monuments was not considered so important when the Archaeological Survey of India was started in 1862. It was kept outside the purview of the Director-General. The local Governments were supposed to be attending to them through their Public Works Department. During the Viceroyalty of Lord Lytton, however, a change came over the policy and the Viceroy wrote: 'the preservation of national antiquities and work of art ought not to be left exclusively to the charge of local governments which may not always be alive to the importance of such a duty. Lieutenant Governors who combined aesthetic culture with administrative energy are not likely to be very common and I cannot conceive of any claims upon the administrative and financial resources of the Supreme Government more essentially imperial than this'. This was soon followed up by the appointment of H. H. Cole as

the Curator of Ancient Monuments who was to carry out a general system of conservation. Some monuments in South India like those at Kāñcīpuram, Mahābalipuram, Tanjore, Tiruchirappalli and Madurai received some attention. But the new post was abolished within four years of its creation and the work of conservation of monuments devolved on the provinces once again.

The dawn of the present century marked the beginning of a new era in the history of conservation on account of the legislation that was made for the protection of the ancient monuments and antiquities in the country. The legislation was actuated by three motives: to ensure the proper upkeep and repair of ancient buildings in private ownership excepting those that were used for religious purposes, to prevent the excavation of sites of historic interest by ignorant and unauthorised persons and to control traffic in antiquities. The bill was modelled on legislations of a similar nature made in England, Greece and Italy, though it was adapted to Indian conditions and sentiments.

The preservation of archaeological monuments having come to be considered as a permanent responsibility of the State, the Archaeological Department set itself to the work in all earnestness. While formerly it had the work done through the Public Works Departments in each province it is now doing it through its engineering and technical branches. The conservation and preservation work consists of "the clearance of their (of the monuments) plans by rescuing them from heaps of fallen debris, the preservation of the core masonry or brick work exposed by the facing having fallen off, filling up and grouting cracks, underpinning worn-out bases of walls, re-setting perilously out-of-plumb walls, making ruined wall-tops water tight, pointing open joints, eradication of vegetation etc." Much of the work of the Archaeological Survey relates to such conservation and preservation; and the money and time spent on such work are justified by the results. The work done in the Kailāsanātha temple at Kāñcīpuram or the Bṛhadēśvara temple at Tanjore is worth particular mention. The Shore Temple at Mahābalipuram which is so close to the sea and hence subject to the beating of the waves and spray as also the salt-laden draft from the sea has been receiving sufficient attention at the hands of the Department. To prevent the direct action of water a large semi-circular groyne-wall of pre-cast concrete blocks has been constructed between the sea and the temple. Some monuments and

relics of art like painting are being preserved with the help of chemicals. Some paintings have been recovered also, as for instance Cōḷa paintings in the sanctum of the Bṛhadīśvara temple, Tanjore over which there was a layer of Nāyak paintings. Many monuments in South India which have mural paintings such as those at Śittannavāśal, Kāñcīpuram, Tirumalaipuram, Lepākshi, Sōmapalle and Srirangapattana are receiving good attention at the hands of the Chemical Branch of the Archaeological Survey. But there are many more monuments belonging to different periods which have to be protected and preserved. South India being rich in temples the work is really stupendous.

The value of a museum (literally a seat of the Muses) in which are collected a number of exhibits of different kinds to illustrate the progress of the country's history and culture can hardly be exaggerated. The authors of the Markham Report on the Museums of India complained some twenty years ago that the money spent on museums in India was not more than the fraction of an anna per head of the population, while in England for instance about three pence per head was spent annually on the museums. There is still much truth in the observation, though we notice in recent years a growing appreciation of the importance of museums. The Government Museum in Madras is the only large Museum in South India which serves as a centre not only for visual education of children and adults but also as something of an institution for higher study and research. It has grown out of the one that was established in 1854 by the Madras Literary Society, and located in Fort St. George. Next to it comes the Museum at Pudukkōṭṭai which contains good collections of an archaeological nature besides many others. In 1948 was founded the Fort Museum at Madras to house the relics and the movable antiquities associated with the Fort and its history. The other museums in South India except those in Hyderabad, Bangalore and Trivandrum are only collections of a few artistic works. It would be useful if we are able to organise in our University an archaeological museum with exhibits representative of different phases of India's history and culture such as customs, manners, religion, arts etc., like the Asutosh Museum in the Calcutta University.

South India is exceptionally rich in inscriptions on which the reconstruction of the history of the area depends. Some places are very prolific in them. Śrīrangam alone contains about 650

inscriptions and Kāñcīpuram probably an equal number. From the time of the organisation of the epigraphical branch in 1885, so far some forty thousand inscriptions from the old Madras Province area have been copied and deciphered by the Department. Besides some thirty thousand inscriptions have been copied and published in Mysore, Hyderabad, Travancore and Pudukkōṭṭai. But much work still remains to be done. The whole of South India has to be surveyed for epigraphical collections and inscriptions copied to prevent their loss. It would be of considerable help to scholars working on South Indian History if the collected inscriptions are published as early as possible and a Topographical List of South Indian Inscriptions is published on the lines of V. Rangachary's List of Inscriptions of the Madras Presidency.

The large volume of good work done by the Archaeological Department in South India has been considerably supplemented by the work done in the former Indian States of Hyderabad, Mysore, Travancore and Pudukkōṭṭai with regard to exploration and excavation, preservation of monuments, epigraphical work and archaeological research. To the credit of the Archaeological Department of Hyderabad go some excavations like those at Maski and Koṇḍāpūr, preservation of great monuments like those of Ajaṇṭa and Ellōra and collection and publication of thousands of inscriptions and to the credit of the Mysore Archaeological Department go, apart from minor ones, excavations at Candravalli and Brahmagiri, preservation and maintenance of artistic monuments like those at Halebid, Bēlūr, Somanāthpur, Śravaṇabelgoḷa, and Śrīrangapaṭṭaṇa and the collection and publication of thousands of inscriptions in the volume of the *Epigraphia Carnatica* and the *Mysore Archaeological Series.* The Travancore Archaeological Department has published in the *Travancore Archaeological Series* the inscriptions collected by it in the State and maintained some archaeological monuments like the Padmanābhapuram palace noted for the mural paintings in it. The Pudukkōṭṭai Durbar collected and published almost all the inscriptions found in the State and maintained a number of archaeological monuments in it besides exploring and excavating many archaeological sites which have thrown much welcome light on some aspects of proto-historic culture in the region.

The only region in South India that had not been served by a similar organisation was the area covered by the old Madras

Presidency. With the creation of the new Andhra Pradesh the Andhra area of the old Madras Presidency has come under the Archaeological Department of the old Hyderabad State. Thus the only remaining area in South India without an Archaeological Department at State level is the present Madras State, which is second to no other part of the country in its archaeological wealth. Considering the magnitude of the archaeological work that has to be done in the State, it is highly necessary that the Madras Government thinks of the creation of such a Department. The work is certainly a great strain on the Archaeological Survey of India and the Union Government have therefore been advising all State Governments to have each such a department. The reorganised Madras State will be a compact and homogenous area for archaeological work at State level.

The foregoing Survey should enable us to appreciate the varied problems and material relating to South Indian Archaeology stretching from the period of the Stone Ages down to present times. Though there is seen some perceptible increase in the interest for the subject, it must be recognised that trained agencies for such work are very much limited still. There are some institutions in the Deccan and North India which have been doing good work in the field. For instance, the Deccan College Research Institute has been undertaking ventures of different kinds and contributing much to revealing India's past. The Allahabad, Baroda and Saugor Universities have won recognition in the field through their archaeological excavations. It is good for South Indian Archaeology that our University has come to take more practical interest in archaeological studies. With their limited resources Universities may not always be able to launch upon costly archaeological undertakings. But it may be possible for them to interest themselves in regional archaeology. For instance, the University of Madras, situated as it is in the region of Stone Age cultures and amidst the monuments that stand to this day bringing home to our minds the artistic achievements of by-gone ages, may be able to devote itself to field and table archaeology in South India, besides training young men for such work and by supplementing the work of the Archaeological Survey of India win for the region its due place in the archaeological map of the country.

INDIA, INDONESIA AND INDO-CHINA

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European imperialism conferred one benefit on the vast countries of Asia it ruled and exploited in the nineteenth and early twentieth century; it recovered the past history of these lands, and put in the limelight many a glorious achievement in art, literature and politics that had long been forgotten. European scholars studied the old texts in different languages, critically edited them and generally translated them into a modern language. They systematically explored the countries concerned, listed and described their antiquarian monuments, recovered the inscriptions engraved on stone and metal belonging to different ages, and reconstructed the outlines of the past history and culture of these lands. Almost till towards the close of the last century, everywhere these tasks were the monopoly of European savants and administrators. What happened afterwards was not the same in all cases. In India, where the British rulers adopted the policy of educating the people along Western lines, there grew up scholars who could emulate their European teachers and carry on their work further. Elsewhere, as in Indonesia, the rulers preferred to learn the language of the people rather than educate and train them along modern Western lines; there the monopoly of scholarship continued longer. But everywhere by the influence of the press and other means of communication, the results of modern scholarship seeped down to the people and they began to be aware of the great deeds of their ancestors and be proud of them. This has been a no mean factor in the generation and promotion of nationalist feelings in the different regions of Asia.

The history of ancient Indian colonization of the eastern lands across the Bay of Bengal now stands forth as one of the most creditable and peaceful achievements of the Hindus, using the term in a broad sense. Ethnography, linguistics, and the still meagre evidence of archaeology suggest the prevalence of trade and culture contacts among the different parts of the vast littoral of the Indian Ocean in prehistoric times. This fascinating subject has

so far been studied only sporadically—in the comparison of boat designs, in stray excavations in the Philippines and so on, and not pursued systematically as it deserves to be. For some reasons that still await full elucidation, there was a considerable increase in the intercourse between India and the East in the early centuries of the Christian era. Some scholars would place the beginnings of this movement in the early centuries B.C. and the story that Buddhist missionaries were sent to Suvarṇabhūmī after the Buddhist Council held at Pāṭaliputra in the reign of Asoka Maurya may be cited in support of this view. Whatever that may be, there is no doubt that in the early centuries of the Christian era a number of small Hindu states studded the islands of the Archipelago, the Malay Peninsula and Indo-China. The names of these States together with stories relating to the origin of some of them are preserved in Chinese annals and in the reports of Chinese ambassadors who visited the states. The *Geography* of Ptolemy records the names of several ports which are seen to be of Sanskrit origin. Archaeological excavation goes far to confirm this by bringing to light artifacts of unmistakable Mediterranean, and sometimes of Iranian origin. It was the age when India was carrying on an active trade with the Roman empire, and Indian merchants and ships formed the connecting link between the west and the East. Naturally by its geographical situation South India took the lion's share in this movement of colonisation. To say this is not to deny the share of the rest of India in the enterprise; traditions of migration from Gujarat are strong both in Gujarat and in Java; Pāla influence on the art of Java, and the temporary use of early Nāgari script in inscriptions of Central Java in the ninth century A.D., are undeniable facts. But such influences were relatively late, and not quite so persistent as those from the South of India.

The script of the earliest inscriptions dating from the third to the sixth centuries A.D., in all these lands is clearly Brāhmī of the South Indian variety, or even more significantly what came to be known as Pallava Grantha. The seven inscriptions in Sanskrit verse engraved on large stone yūpas (sacrificial pillars from East Borneo, and other inscriptions also in Sanskrit verse from West Java which are only half a century or so later (c. 450 A.D.), do not differ in any way from the contemporary inscriptions of the coastal Andhra country. The modern alphabets in

current use for Burmese, Siamese, Cambodian, Javanese and other languages show unmistakable traces of their common origin from ancient South Indian modes of writing. The kings of these states bore names ending in -varman like the Pallava kings of South India. Two of their royal dynasties in Indo-China traced their descent from the union of a sage or Brahman with a semi-divine Nāgī maiden, just as the Pallavas traced their descent from Aśvathāman and Madanī. Pāli Buddhism which was quite strong in the Krishna valley and Kāñchīpuram clearly went over to Burma from this region as the citations from Buddhist scriptures engraved on gold plates discovered in different villages in Burma and dating from the fifth and sixth centuries A.D. are engraved in the same South Indian characters as the stone inscriptions noticed earlier. Śrīkshetra, the kingdom of Prome, had an alternative name Vanavāsi which recalled the capital of the Kadamba rulers of South India. The name Talaing applied to Moṅs in Burma and the name Kling applied to all Indians in Malaya and Indonesia indicate that Telingana and Kalinga played a prominent part in the sending forth of colonists to these regions. It has been observed that the forms of many of the Pagan temples of the twelfth century A.D. certainly suggest the presence of architects from the Deccan along with others from Ceylon. We may also mention the Grantha-Tamil inscription of Pagan of the thirteenth century recording a gift by a merchant from Malabar to a temple built in Pagan by the Nānādeśi merchants, a South Indian merchant guild. Who can say whether it is a chance, coincidence or something more that we find two versatile kings, both called Mahendravarman, both devotees of Śiva, one ruling in Kambuja in Indo-China, and the other at Kāñchīpuram in South India at the beginning of the seventh century A.D.? In A.D. 968 King Jayavarman V of Kambuja is compared to Śrīparvata in a manner that brings out forcibly not only the Śaivite leanings of the author but also the source of Kambujan Śaivism. The verse reads:

Dakṣiṇāpatha vinyasta-sārassiddhiprado' rthinām,
Yuktam yo yuktinipuṇaiḥ Śrīparvata itīritaḥ

meaning: "Distributing his wealth by way of *dakṣiṇā* (having his essence in the Deccan), giving success to those who come to him with solicitations (giving *siddhi* to those who desire it), he received logically, from experts in logic the name of Mountain of Prosperity (*Śrīparvata*)." An inscription of the reign of Indra-

varman I dated between A.D. 878 and 887 records that the royal *guru* Śivasoma had learned the Śāstras at the feet of Bhagavān Śaṅkara, a clear and unmistakable reference to the great Advaita philosopher of South India.

In Champā the cult of Bhagavatī flourished in some strength as it has done in Malabar through the centuries. The Bhagavatī temple of Po. Nagar has a long history recorded in its Sanskrit inscriptions. Amarāvatī and Pāṇḍuranga formed the names of two territorial divisions of ancient Champā; and Champā itself may be a name carried over from South India where it had early become the alternative name of Puhār, the celebrated Chōḷa port-town. In Takua-pa (Malay Peninsula, Siamese part) was found a typically South Indian sculpture of Vishṇu and his two consorts by the side of a Tamil inscription of the time of Pallava Nandivarman III (ninth century A.D.), recording the digging of a tank called *Avani-nāraṇam* after one of the titles of the king; the tank was placed under the protection of the Maṇigrāmam (a Tamil merchant guild) and the Cantonment (Senāmukham) of the locality. This is valuable evidence of the spread of Pallava influence across the Bay, and of the presence of Tamils as such in some strength in the eastern lands maintaining live contact with their home country. A similar testimony is offered by a fragmentary Tamil inscription from Sumatra dated in the eleventh century and mentioning another famous merchant guild, the *Nānādeśis.* In Nagara Śrī Dharmarāja near Ligor was found a bronze Gaṇeśa bearing a Tamil inscription in modern characters and reading *majhapi cideśa* i.e., the prosperous country of Majhapi (Majāpahit), the name of the last Hindu Javanese empire. The cult of Agastya is common to South India and Malaysia. The Javanese Chaṇḍis (tomb-shrines) enshrining portrait figures of dead kings and queens is clearly a development of the South Indian *paḷḷipaḍai* shrines of which we hear in our inscriptions; and in architecture the Chaṇḍi Bhīma in Central Java is typically Pallava and closely resembles the *rathas* of Māmallapuram (Mahābalipuram). The great temple of Angkor Vat in Indo-China erected by Sūryavarman in the twelfth century is an integrated and improved version of the monumental Chola temples of the South.

It is no exaggeration to say that what occurred in these lands was a continuation and completion of the process by which the whole of India was aryanised and bound together in the silken bonds

of a cultural synthesis. The same problems of initial conflict followed by growing friendliness and fusion, and later a recrudescence of the submerged indigenous elements are met with in the early history of India as well as these lands across the sea. The two studies if properly pursued and pursued together may well be expected to illuminate each other much more than when studied in isolation. The object of recalling the few prominent facts mentioned in the preceding paragraphs has been to illustrate the prominent role of South India in this great humanitarian and unifying work of the past. It was a natural, creative process; there was some adventure in it, but no touch of political ambition or economic exploitation. Political subjection of the colonies to India was unknown; at the same time the extent of Indianisation of the Colonies was so great as to lead the Greek and Arab geographers to extend the bounds of India right up to the borders of China and include the islands also.

Much excellent work on the early history and prehistory of these lands has been done particularly after the commencement of the twentieth century by the French Archaeological Commission of Indo-China and the French School of Hanoi (now functioning from Saigon), and by the Dutch Archaeological Department of Java and the Royal Batavian Society of Arts and Sciences. The books in English on the subject are by no means negligible, but they are not nearly enough to furnish a basis for advanced original research. Any one who wishes to enter this field of work where much still remains to be done especially from the standpoint of South India, must choose the field of his work and acquire the linguistic equipment for it. A good knowledge of Sanskrit is desirable in every case; French and Khmer, Siamese, Moṅ or Burmese for Indo-China, and Malay and old Javanese and Dutch for Indonesia are obvious desiderata. The discipline is likely to be strenuous, but the experience is bound to be exhilarating and the results of study would bring about a much needed and tangible improvement in our knowledge of the racial movements and cultural developments of the past. South Indian Universities owe a great duty in this respect, and I wish to conclude this note with expressing the hope that the leading University of the region which is now celebrating its Centenary will initiate systematic work on the ancient history of S. E. Asia at the commencement of the second century of its luminous career.

XVII

PROBLEMS OF SOUTH INDIAN HISTORY

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The celebration of the Centenary of a temple of learning is as much an occasion of rejoicing as one of 'stock-taking' and planning for the future. It provides an opportunity for introspection, enabling us to assess the achievements of the past in the field of research, and at the same time, to visualise the work that lies ahead of us. A realisation of what has been accomplished is essential not as a source of self-complacency, but as an inspiration for future progress. There is always something to be gained by our seeing us ourselves, which is not less valuable than others seeing us and inspiring us.

It is widely recognized that the history of South India has remained a sadly neglected field of study. Dr. V. A. Smith, the first systematic historian of India, admitted that most writers of ancient Indian History had totally ignored the South. Realising the great antiquity of Peninsular India, Prof. Sundaram Pillai of 'Manōnmaṇiyam' fame, urged that 'the scientific historian of India ought to begin his study with the basin of Krishṇā, of the Kāveri, of the Vaigai, rather than with the Gāngetic plain, as has been now long, too long, the fashion'. The cry for the need of a proper re-construction of South Indian History is by no means a call for provincialism in historical study. In a vast sub-continent like India, regions which have had distinct historical developments deserve intensive investigation as an essential pre-requisite of a well-coordinated study of the entire country's history.

The inadequacy of reliable data is frequently alleged to be the cause of the neglect of South Indian history. But the available sources themselves have not been fully made use of, as part of a systematic historical study. Moreover, the dictum that 'wants create activities, which, in their turn, create fresh wants', is true of human endeavour in all fields, not excluding that of historical research. If a despondent feeling of defeatism had frustrated the

efforts of the earlier scholars, much that is known to-day of South Indian history would have continued to remain a sealed book down to the present.

It is worth while recalling the fact that, about half a century ago, little was known about the empires of the Vijayanagara rulers or of the Pallavas. Now, on the other hand, almost a comprehensive picture of these powers, their political achievements as well as their contributions to South Indian culture and civilisation have been brought to light, thanks to the patient labours of scholars like Robert Sewell, S. Krishnaswami Aiyangar and Jouveau V. Dubreuil. The Arthaśāstra, the oft-quoted manual of polity, was not disclosed to the world until it was discovered sheerly by chance in 1905. The world-famous Ajanta caves, the Jaina paintings of Sittaṉṉavāśal or the Chōḷa paintings of the Brihadīśvara temple are all discoveries of recent times. Neither the Vākāṭaka dynasty nor the Āy line of Kō-kkaruṇandaḍakkan and his successors was known to scholars of previous generations, until inscriptions revealed their past.

Naturally, historical research is always indebted to epigraphy, archaeology, linguistics and other allied branches of knowledge. A proper co-ordination of all these handmaiden of history is indispensable for a satisfactory re-creation of the dead past. Specialisation, far from excluding the co-operation of related subjects of study, demands it as an indispensable condition of the advancement of knowledge. "Academic life" observes Alfred Kazin, "thrives on co-operative specialisation, on a body of scholars who not only respond to one another but all who need each other".

The vast mass of epigraphic material pertaining to South India, which has been copied since the opening years of this century, still remains to be published. The spade of the archaeologist may disclose treasures from even unexpected quarters. Who knew before 1923 what Mohenjo Dārō and Hārappa would reveal to the world? And, before the excavations at Arikāmēḍu were undertaken and systematically studied by Dr. Mortimer Wheeler in 1945, our knowledge about the Roman colonies in South India was derived only from the indigenous literary source and the references found in the accounts of foreign writers. The distinct significance of the Arikāmēḍu excavations is that they have provided a chronological foot-hold for the early history of South India.

PROBLEMS OF SOUTH INDIAN HISTORY

Chronology is the bed-rock of history, and there are numberless riddles in the chronology of South Indian history. P. T. Srinivasa Aiyangar, the ripe scholar, who has rendered valuable service to the cause of historical research, was a little too despondent when he wrote: "If chronology is the eye of History, Ancient Indian History will have to be always blind". The present position provides scope for a slightly more optimistic view of the situation. Nevertheless, there are numerous institutions and literary works of the past in respect of which little more than an approximate determination of the chronology is possible in the present state of our knowledge.

The age of the celebrated Tamil Śaṅgam has been an endless subject of controversy. The commonly accepted view assigns the Śaṅgam, or what is believed to be the third Śaṅgam, to the early centuries of the Christian era on the basis, firstly, of the Gajabāhu Śeṅguṭṭuvan synchronism and, secondly, of the data furnished by foreign writers of the 1st and 2nd centuries A.D., which tally with the references to the maritime commerce found in the Classics. But, that view has been occasionally challenged.[1] Even so recently as 31st October 1956, one writer had to be content with saying that 'modern scholarship is inclined to the view that these (Śaṅgam) poets probably lived and flourished between the 2nd and 7th century of the Christian era'. And, he adds that the matter has not been finally settled.[2] There does not seem to be any reasonable doubt that the songs which refer to the details of the maritime trade belong to the 2nd century A.D. or perhaps to an earlier date. By what length of time these were separated from the other Śaṅgam poems is the point at issue. The syntax and orthography of the Śaṅgam classics as a class, as well as the political and social conditions reflected in them suggest a close affinity between them all; therefore, there is a great probability that the age of this literary activity could well have ranged about the 2nd century A. D. However, it is a theme which bears further investigation.

Equally important is the determination of the dates of such early literary works like the Tolkāppiyam, the earliest Tamil

1. K. K. Pillay: "The Brāhmī Inscriptions of South India and the Śaṅgam Age", Tamil Culture, Vol. V, No. 2.

2. 'Rich heritage of Tamil', "The Hindu" Supplement, 31st October, 1956.

grammar extant, the immortal Tirukkuṟaḷ and the twin epics, Śilappadikāram and Maṇimēkhalai. Tolkāppiyam and Tirukkuṟaḷ have been ascribed by different writers to different dates, beginning from the centuries just preceding the Christian era down to the 5th century A. D. Writers there are who ascribe the epics to the 2nd century A.D., while others take them down to the 10th or 11th century. Linguistic, astronomic and historical evidences have been adduced in support of their respective contentions.[3] But, an indubitably acceptable position is not yet in sight, though the exponents of particular views evince a certain measure of dogmatism in the exposition of their pet theories. Not infrequently, too, there appears an unfortunate tendency to drag these academic questions into the forum of politics. The worst of it is that there is little of frank exchange of views between the exponents of the rival theories. Nevertheless, there flow mutually suspicious undercurrents of vigilant censorship, rarely finding expression in public, but very vocal and even vituperative in trusted circles. This unenviable state of affairs hardly promotes historical and literary scholarship or social harmony.

In this connection, it is important to repeat the well-known truth that the Muse of History is too sacred to be deflected into irrelevant channels. It is time we realised that sentiment, cultural vanity, intellectual arrogance, communal or linguistic animosity and the allied infirmities have no place in the field of research. Time was, when, in several countries of the world, history was written deliberately to subserve deeper objects, particularly to bolster up patriotism. Such ignoble efforts naturally led to the formulation of conclusions before-hand in order to support which, evidence was sought to be found or manufactured. But the world of scholarship has in no uncertain terms condemned the tendency to write 'history with an ulterior purpose' or to 'read present passions into the past'. The historian should approach problems with an open mind, free from pre-conceived theories and predilections.

But, dealing as we do with social phenomena, we are prone to doubt the practicability of developing such a frame of mind. Is it

3. 'An astronomical approach to the question leading to a conclusion different from that of L. D. Swamikannu Pillai is that made recently by Sri M. Raja Rao. See The Quarterly Journal of the Mythic Society—Culture and Heritage Number, 1956, pp. 261-82.

possible to view all the questions of the past from an absolutely neutral and unbiassed stand-point? Though the difficulties are great, the development of an impartial attitude is not impossible of achievement. For one thing, now there exists an expert public opinion, not confined to one's own country, which can evaluate, and correct if necessary, the conclusions advanced by scholars. That apart, a determined effort on the part of the open-minded devotee of true History is bound to achieve success. Mommsen, the celebrated historian of Rome, at first said: "Those who have lived through historical events, as I have, begin to see that history is neither written nor made without love or hate". But it is significant that, so far as the writing of history is concerned, Mommsen, in his later life, learned to write history without love or hate. Ranke, too, was an upholder of the devotion to unvarnished truth on the part of the historian.

It is true that even conscious effort, at times failed to yield the expected result. Dr. V. A. Smith began with the aim of relating the ancient history of India 'with impartiality' and discussing the problems 'in a judicial spirit'.[4] But, he himself admitted that some measure of subjectivity was likely to hamper the effort though he added that the aim should be to keep it under check to the maximum extent. "Nor is it possible" he said, 'for the writer of history, however great may be his respect for objective fact, to eliminate altogether his own personality. Every kind of evidence, even the most direct, must reach the reader, when presented in a narrative form, as a reflection from the mirror of the writer's mind, with the liability to unconscious distortion. In the following pages the author endeavoured to exclude the subjective element as far as possible'.[5] It must be realised that Vincent Smith, an anglo phile, soaked in the traditions of the I. C. S. for over thirty years, miserably failed to achieve that objectivity which he professed to have had in view. His unwarranted *obiter dicta* at several places and his unjustifiable denunciations of certain features and personalities of Indian history, side by side with his laboured vindications of indefensible actions of certain British heroes, have exposed his failure to keep to his professed aim. But even this need not cause despair. When it is remembered that systematic historical writing

4. V. A. Smith, Early History of India (1914), p. 3.
5. *ibid.*, p 4.

even in the West had its origin only a century and a half ago, there is still ground for optimism.

Certain historians, both of Europe and of India, have proved by their writings that the ideal of perfect objectivity can be achieved. With reference to South Indian history itself, the outstanding example of Sir R. G. Bhandarkar, among the earlier historians, may be mentioned. Though he was himself a propagandist of social reform, his works, including the "Early History of the Dekkan" show a remarkable freedom from bias. Indeed, in his 'Peep into the Early History of India', he expounds the true ideal to be followed by the writer of history. He holds that a historian should set about his work like a judge and not like a barrister. "Nothing but dry truth", declared Sir R. G. Bhandarkar, "should be his (historian's) object; and he should in every case determine the credibility of the witness before him and probability or otherwise of what is stated by him".[6] It is significant that Bhandarkar made a fervent appeal for the adoption of the scientific method in Indological studies, in his learned article, entitled "The critical, comparative and historical method of inquiry as applied to Sanskrit scholarship and philology and Indian Archaeology".[7]

But a strange menace to historical investigation has emanated from certain patriots of our country. They urge that such aspects of history which advert to ill-will or breach of harmony in the past between religions, communities or social systems should not be dwelt upon by historians. We are counselled to draw the curtain completely over such unfortunate aspects of history and shut our eyes to the realities of the past, perhaps imagining that all others also have shut their eyes meanwhile. The object underlying this suggestion is not open to question. But, is the counsel intrinsically sound? In the first place, the investigation into old animosities does not by itself foment ill-will. On the contrary, a knowledge of the past in its proper perspective might well help mutual understanding. Secondly, a true appreciation of other peoples' customs, beliefs and traditions, which are different from our own, normally widens the outlook and restrains the development of self-complacency and arrogance. Centuries ago, Alberuni, the acute scholar

6. Bhandarkar, Collected Works, Vol. I, p. 4.
7. *Ibid.*, pp. 362-93.

observed: "The Hindus believe that there is no country but theirs, no nation like theirs, no kings like theirs, no religion like theirs, no science like theirs." There is little justification for taking offence at his shrewd observation. In fact, this insular outlook on the part of Indians and their total indifference to the rest of the world, paved the way for their degeneracy from about the 9th century A. D. Society became static and civilisation became decadent. A study of other people and their ways is always a sound antidote to such dangers. Thirdly, whether as a result of studying the struggles and animosities of the past, mutual understanding is promoted or not, whether a widening of the outlook occurs or not, deliberate concealment of such facts, far from having the intended result, tends to create suspicion and distrust. Human psychology is such that the more a thing is hidden, the more it rouses the inquisitiveness of people. The idea that investigations into the relationship of the Hindus and Muslims or Āryans and Dravidians in the past, are to be avoided lest they should prove dangerous to social harmony at the present, it is submitted, is nothing but an ostrich-like delusion.

In this connection, an admirably outspoken suggestion made by the ex-Governor of Madras, may be mentioned. Shri Sri Prakasa, in the course of his valedictory address to the Research Scholars' Association of the Madras University, on 4th April 1956, said that, one of the fundamental problems on which the concerned departments of the University could undertake research with advantage, is the historical relationship between the Āryans and Dravidians in South India. Never were more candid words spoken. Knowing as we do, the transparent sincerity and profound scholarship of the Governor, we appreciate greatly the spirit in which this piece of sound advice was given.

Should the study of this question—the relationship of the Āryans and Dravidians in the past—be undertaken in the spirit of a scientific social historian, totally eradicating the subjective factor, it is likely to promote a healthier understanding among the people. If, for instance, it is realised that, the view of water-tight compartments of the two races having once existed in the past in South India is a myth, as it definitely is, a part of the animus is likely to be removed. However, the active cultivation of social or religious concord does not fall within the purview of the resear-

cher. Nor do the smoke-screen tactics have any place in research. Politics and research stand poles apart.

It is not only the study of the racial contact or of the chronological assessment of literary works that calls for objective research and the determination of the "dry truth". Even the political history of the kingdoms of the Śaṅgam age is not possible to be satisfactorily re-constructed. The 'Padiṟṟuppattu' provides an account of kings, but, whether they came in succession one after the other, is not established. In respect of the Chōḷa and Pāṇḍya kingdoms, the position is much worse. Apart from doubts regarding the authenticity of certain achievements credited to kings like Karikāla, the history of these dynasties after the Kaḷabhra incursions, is a blank for nearly three centuries. The origin of the Kaḷabhras itself is still open to controversy, though the probability is that they belonged to the Karnāṭaka country.

However, it seems incredible that the Kaḷabhra invasions were responsible for the long 'historical night' of the 4th and 5th centuries. Those were not days of "total warfare". The non-availability of sources of information, perhaps accounts for the gap in our knowledge of the period. The history of the Pāṇḍyas after the 6th century A.D. has been sought to be re-constructed with the help of the epigraphs, though the dates of particular reigns are by no means settled beyond doubt. There emerge into prominence about the same time, the Pallavas, regarding whose origin, controversies have not yet ceased, but their earlier association with the Sātavāhanas seems to provide a clue to the solution.

Nor are the histories of the successors of the Sātavāhanas full or clear. Accounts of the origin of the Chāḷukyas and Rāshṭrakūṭas are built more upon legend than upon unimpeachable data. J. F. Fleet, K. Rice and A. S. Altekar have no doubt provided the basic frame-work of these dynasties with the help of the numerous epigraphs connected with them. Nevertheless, much more remains to be done before we can have full and comprehensive accounts of those dynasties as also of the Hōysalas, Yādavas and Kākatīyas of the Dekkan. A systematic and comprehensive account of the Chōlas has been furnished by Prof. K. A. Nilakanta Sastri's study of that important dynasty. Though the same writer has admirably re-constructed the history of the Pāṇḍyas in the south, that dynasty awaits a fuller study in the light of the new epigraphic materials now available.

The patriotic fervour among Indian historians was commonly noticed in their tendency to present an over-drawn picture of the village organisations of South India in the past. Several writers yielded to the temptation of reading modern democratic ideas into the old institutions. It is indisputable that the measure of village self-government was highly developed through the centuries. It is also true that the Sabhas of Uttaramērūr and Mānūr had well organised committee systems constituted on democratic lines. But, as Prof. K. A. N. Sastri points out in his "Studies in Cola History and Administration", attempts at generalising from a few known instances are unwarranted. For example, it is not proved by the available data that all the brahmadēya assemblies had adopted the committee system, much less, that of the Uttaramerur pattern. Moreover, it is not always borne in mind that the Mahāsabha of the brahmadēya was different from the 'Ūr' and 'Nāḍu' of the non-brahmadēya villages, which were much more numerous than the Mahāsabhas. Before the exact details of these organisations were assessed in their true perspective, hasty generalisations were made, fanned by patriotic enthusiasm on the one hand, and misguided by certain sentimental Westerners like Sir Charles Metcalfe and Sir John Malcolm on the other. 'A tendency to idealize the time-honoured system appeared, and it looked as though, to cast a doubt on the democratic nature of ancient Indian society and government was a mortal sin against patriotism'.[8] Though the affairs of the village were smoothly managed through the popular institutions, the dominant influence of custom, tradition and caste should not be lost sight of, in drawing an over-all picture of the past.

One region of South India in respect of which the epigraphic material is totally inadequate is that of Kēraḷa. Consequently, there are large gaps in the early history of that region. Apart from the unsettled controversy over the location of the early Chēra capital, the history of the Chēra kingdom for centuries after the Śaṅgam age, is practically a blank. The legends hardly provide us with dependable historical material, though a substratum of truth is discernible in them. The accounts of the Perumāḷ rulers and

8. K. A. N. Sastri: 'Studies in Cola History and Administration' (1932), pp. 107 ff. K. K. Pillay: 'History of Local Self-Government in the Madras Presidency, 1850-1919', (1953), pp. 2-8.

the Nambūdiri magnates are by no means full or reliable. Inscriptions appear in connection with the Vēṇaḍ rulers and their conflicts with the contemporary Pāṇḍya and Chōḷa sovereigns. But, what was the relationship between the Vēṇaḍ king and the Chēra sovereign? The attempt made to identify the one with the other is beset with insuperable difficulties. Apart from the mystery connected with Chēramān Perumāḷ, who is claimed at once by the Jains, Christians, Muslims and Śaivites to have been one of their adherents, the authenticity of his alleged partition of the kingdom and the identity of his successors remain to be settled. From the 9th century A. D., if not from an earlier period, there appear to have ruled several chiefs or vassals of the Chēra sovereigns. Among the later Chēra kings, some like Sthāṇu Ravi and Bhāskara Ravi Varman figure prominently through their inscriptions. However, it is not until the appearance of the Portuguese on the scene that a definiteness emerges on the historical horizon.

It is by no means held that the history of South India after the advent of the Europeans has been satisfactorily written. On the contrary, there are numerous problems in respect of the later period too, which await solution. The distinguishing feature, however, is that there is an abundance of sources in the shape of travellers' accounts, official correspondence and State Papers. But, it is well to remember that the official documents do not always provide us with a comprehensive or totally dependable picture. The interpretation of these sources has been done so far chiefly by retired British civilians, who had their own inherent prejudices. Nor have they concerned themselves with any phase of history other than the political or administrative aspect.

In fact, the social history of South India remains to be written. The scope of history has widened now. It is no longer concerned exclusively with kings and ministers, wars and treaties. The history of the common men, of their social and religious life, of their culture and civilisation constitutes the principal aspect of the history of a people. The focus of the historian had shifted even sometime ago from the traditional pattern. "Instead of the old restriction to the study of kings and dynasties, warriors and the like, there came also a more human conception of the proper province of history, to include ordinary social functions, such as games, social manners, everyday business transactions, all the things

which constitute the substance of the daily life of men, women and children."[9]

Thus, many and varied are the problems which demand the attention of the historian. The few which are mentioned in this paper are but representative ones. For those who set about the task with the firm determination of serving the Muse of History faithfully and fearlessly, there is ample scope for adding to our knowledge of South Indian History.

"All agree that we have no business to seek more from the past than the very past itself. Nobody disputes with Cicero when he asks: 'Who does not know that it is the first law of history not to dare a word that is false? Next, not to shrink from a word that is true. No partiality, no grudge. Though nobody disputes the obvious answers, have a majority of historical practitioners complied?" John Morley.

9. Cohen: 'The Meaning of Human History', p. 15.

XVIII

SANSKRIT LITERATURE

C. 1700 to 1900

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A survey of Sanskrit literature in the last two centuries discloses that it is not devoid of either quantitative or qualitative distinction. As it has always been, Sanskrit scholars and authors were patronised at the different courts and except where such royal affiliation is not clear, they are best described on dynastic or regional basis. Besides the *Agrahāra* settlements granted to them, famous pilgrim and temple centres have been the scenes of continuous and prolific literary activity; and it is wellnigh impossible to give a full account of such activity in places like Banaras to which scholars moved from every part of the country and which could be described as open University-towns. Grammatical works liks the *Bālamanoramā* on the *Siddhāntakaumudī* and those of Nāgeśabhaṭṭa are examples of productions of this period which have gained a secure place in the scheme of necessary studies. In *belles lettres,* while the majority of poems and rhetorical works took the form of euologies of local chiefs, kings or patron-deities, this period witnessed a very large output of imitations of the *Meghasandeśa,* useful in a way for local geography as in the Kerala specimens, and of erotic monologues called *Bhāṇa* which is so scarcely represented in the earlier periods; grammatical poems like *Bhaṭṭikāvya* were also written; the new form of a poem presenting the pros and cons of different things through two spectators, an appreciator and a detractor, which was first devised by Veṅkaṭādhvarin in his *Viśvaguṇādarśa,*[1] not long before our period, caught the imagination of authors of this period, who produced at least three works of this

1. Printed by N. S. Press, Bombay.

type: the *Keralābharaṇa*[2] on the customs and manners of Malabar and other parts of South India by Rāmacandra Makhin of the family of Rājacūḍāmaṇi Dīkṣita, the *Tattvaguṇādarśa*[3] of Surapuram Annayārya presenting the comparative merits and defects of Śaivism and Vaiṣṇavism; and the *Kāśikātilaka*[4] on Banaras by Nīlakaṇṭha; the merits and demerits of the present age were expatiated upon in a *Campū* poem by the versatile Nadia author Kṛṣṇakānta;[5] in drama, plays with abstract characters were produced, the *Amṛtodaya* of Gokulanātha of Mithilā (18th cent.), on Nyāya philosophy, the *Anumitipariṇaya*[6] on the process of Inference by Narasiṁha Kavi of Madras, and the *Prapannasapiṇḍīkaraṇanirāsa*[7] on a controversial point in obsequies.

Rāmapāṇivāda in Malabar, Ghanaśyāma at Tanjore and Viśveśvara at Kumaon evinced interest even in the Prākṛts. Devotional literature in the form of accounts of local shrines and hymns formed a considerable class. Women continued to cultivate the language to a creative standard. Sectarian controversies and dialectics among the different schools of Vedānta continued and the different pontificates of the schools kept up both religious and scholastic interest on the one hand and zeal for polemics on the other. The Anglo-Sanskrit contact that was to happen soon was indeed the most significant and culminating point of the history of this literature in this period; for it is this contact of the West with Sanskrit that led to the birth of a new critical outlook and cultural appreciation of ancient India's manifold contributions to branches of knowledge, a process which has led to a recovery of India's past with altogether a new enthusiasm. Sanskrit proved once again its resilience and genius for adaptation, and was on the threshold of a new age and phase of its history. We see in the period we are surveying, the coming into being under state and private auspices the modern Sanskrit Colleges and these becoming the venues of the activities of the Pandits and the media for the preservation of their learned tradition.

2. TD. 4031-4. The abbreviations used for references to Mss. and Mss. catalogues are according to the *New Catalogus Catalogorum* (*NCC.*), Madras University, Vol. I.

3. MD. 12295-6.

4. MT. 2011.

5. HPR. Report, 1901-6, p. 9.

6. MD. 12463.

7. MD. 12548.

Tanjore

The great days of Sanskrit in Tanjore were when Sahaji (1684-1710) was on the throne,[8] but his two younger brothers, Serfoji (1711-28) and Tulajā (1729-35), were no less enthusiastic about Sanskrit or in patronising or gifting land to Sanskrit writers. Some of the writers of the first brother's time were attached to Serfoji also, *e.g.*, Sadāśiva Brahmendra who specially sent Serfoji his blessings for progeny, and the royal purāṇa-reciter, Ḍhuṇḍi Vyāsa, who wrote his gloss on the *Mudrārākṣasa Nāṭaka* during Serfoji's rule. Anantanārāyaṇa styled Pañcaratnakavi was closely associated with the King; one of his works, the *Rāghava-carita*[9] goes by Serfoji's name, and another is on Serfoji's life.[10] Another author to write on Serfoji's career is Jagannātha, a Mahārāṣṭra poet and playwright who became a disciple of the celebrated Bhāskararāya in Śākta cult and assumed the name Umānandanātha;[11] Naidhruva Veṅkaṭeśa who wrote the historical Campū on Serfoji and his predecessors in his *Bhosalavaṁśāvaḷi*,[12] was the author of five more poetic and dramatic works.

Tulajā figures as the author of many works relating to poetry, music and dance, jyotiṣa, medicine etc., the best known work of his being the *Saṅgītasārāmṛta*.[13] A compendium of manifold Mantra-material prepared in Tulaja's court is the *Sāmrājyalakṣmīpīṭhikā*.[14] Among his chief poets were Sadāśiva Dīkṣita who produced a *Gītagovinda*-imitation on God Sundareśa[15] at Madura, and his domestic minister Ghanaśyāma, a prolific and versatile but mediocre and vainglorious writer;[16] poet, grammarian and commentator, Ghanaśyāma was also a Prākṛt enthusiast[17] and his

8. For a full account of Sanskrit literature under Sahaji, see my Introduction to *Śāhendravilāsa* of Śrīdhara Veṅkaṭeśa Ayyāvāl, Sarasvati Mahal Library Series, 1952.

9. *New Catalogus Catalogorum* (*NCC.*) I. 132a.

10. *Śarabhojicarita, ibid.*

11. On him, see G. V. Devasthali, *C. K. Raja Presentation Volume*, pp. 271-284.

12. TD. 4240.

13. See edn. Madras Music Academy, and my Introduction there.

14. Published by the Sarasvati Mahal Library; it appears to be a contemporary compilation.

15. The *Gītasundara*, Ptd. Vani Vilas Press, Srirangam.

16. See, V. A. Ramaswami Sastri, *JOR*, Madras, III. 231 ff.

17. See his *Ānandasundarī Saṭṭaka*, edn. A. N. Upadhye, Banaras, 1955.

plays *Ḍamaruka*[18] and *Navagrahacarita*[19] break new ground both in form and matter. More interesting is it to know that his two wives, Sundarī and Kamalā, were literate and figure as joint authoresses of a gloss on the *Viddhasālabhañjikā.*[20]

A little later flourished Vāñcheśvara, a Kannaḍiga of Tiruviśanallūr, who is celebrated for his bright satire on the deteriorated literary court at Tanjore, the century of verses on the Buffalo, *Mahiṣaśataka,*[21] on which his greatgrandson and namesake wrote a gloss.[22]

Serfoji II (1800-32), son of Tulajā II, came under the influence of Schwartz and is the person responsible for the present Raja Serfoji Sarasvati Mahal Library collections, many of whose manuscripts collected by him from far and wide and during his pilgrimage to Banaras, bear his superscript. Despite the missionary influence, he maintained his love and patronage of Sanskrit and Hindu religion and culture, and Dharmaśāstra appears to have received his special attention: he had a number of scholars in Dharmaśāstra whom he commissioned to compile jointly Smṛti digests. Equally important is the fact that Vedic and domestic ritual too received attention at his time: Bāla *alias* Yajñeśvara Dīkṣita[23] and Vāsudeva Dīkṣita[24] of a Tiruviśanallūr family were Karma-kāṇḍa writers of this time; the latter, who wrote also the *Adhvaramīmāṁsākutūhalavṛtti,*[25] can never be forgotten by students of Sanskrit grammar, for it is to him that they owe the lucid exposition of the *Siddhānta Kaumudī* called *Bālamanoramā,* studied now all over India. Aṇṇāvaiyaṅgār of Kañjanūr was Serfoji's official compiler of almanac; it is to him that we owe what is now current as the *Kañjanūr Pañcāṅgam.*

Even when Tanjore decayed after Serfoji II, the neighbouring principality of Pudukkottai was carrying on its active Sanskrit patronage; Pudukkottai, in fact, was one of the few places where even till recently Sanskrit Pandits met in annual Sadas, disputed and displayed their Śāstraic erudition. The seeds of this

18. Ptd. Vani Vilas Press, Srirangam.
19. TD. 4689.
20. TD. 4678. Edn. Calcutta, 1943.
21 and 22. Ptd. Text with gloss, Vani Vilas Press, Srirangam.
23 and 24. *E.g.,* their *Bodhāyana Śrautasūtra-vyākhyās,* TD. 2063, 2064.
25. Partly printed by Vani Vilas Press, Srirangam.

scholarly tradition at this centre were sown by the renowned Sannyāsin Sadāśiva Brahmendra who blessed King Raghunātha Rāya Toṇḍamān and gave him as preceptor his own classmate, the grammarian Gopālakṛṣṇa Śāstri, author of the *Śābdika-cintāmaṇi.*[26] A pupil of his, an Appayya Dīkṣita, c. 1750, wrote a fresh commentary on Pāṇini.[27]

The descendents of the several lines of the family of the great Appayya Dīkṣita and his brother's grandson Nīlakaṇṭha Dīkṣita were spread all over the South; the most celebrated of the scions of this family was Tyāgarāja Makhin, popularly known as Rāju Śāstrigal, of Mannārguḍi, who wrote the *Nyāyenduśekhara* and many other works, and defended Advaita and Śaivism against Viśiṣṭādvaita, Dvaita and Vaiṣṇavism. Among Smārtas to oppose him was Tiruviśanallūr Rāmasubbā Śāstrigal of fertile brain who adopted a rather original philosophical standpoint.[28] A similar critic of the same Rāju Śāstrigal was Veṅkaṭeśa, patronised by the Setupati of Rāmnāḍ, who wrote the *Triṁśacchlokī* or *Viṣṇu-tattvanirṇaya* with commentary. Appayya Dīkṣita of Eḍayāttu-maṅgalam, c. 1775, defended Śaivite tenets against these attacks in his *Vimatabhañjana.*[29]

Besides Sadāśiva Brahmendra, the Advaitic saint already referred to, there were a number of Sannyāsins in the Tamil country whose contributions to Advaitic literature are valuable. Sadāśiva himself wrote a good number of works, and more than his writings, his life left a deep impression upon the whole Tamil country, where, even today, at Nerūr on the Cauvery, his annual festival is celebrated. Gaṅgādharendra Sarasvatī wrote the *Svārājyasiddhi,*[30] *Vedāntasiddhāntasūktimañjarī,*[31] *Siddhānta-candrikodgāra* etc. The Telugu Ayyaṇṇa Kavi, called Vīṇai Ayyaṇṇa for his proficiency on the lute, and son of Veṅkaṭa Kavi author of Telugu works like *Rādhāmādhava Saṁvāda,* and younger brother of Narahari who wrote Telugu Prabandhas like *Sudantākalyāṇa,* received his teaching from Śrīdhara Veṅkaṭeśa

26. Adyar D. VI. 138.
27. *NCC.* I. 195b.
28. A few of his works have been printed; for manuscripts of his works, see Madras Government Oriental Mss. Library Catalogues.
29. See *NCC.* I. 202a.
30. Ptd. Madras.
31. Ptd. Calcutta Sanskrit Series, 1935.

Ayyāvāl of Tiruviśanallūr in Tanjore and wrote the *Praṇavārtha-prakāśa*, the *Vyāsatātparyanirṇaya* and the *Yajñaśāstrārtha-nirṇaya*.[32] *Prapañcāmṛtasāra* is a comprehensive philosophical survey ascribed to the Tanjore king Ekoji II and written really by one Mahādeva; the work is available in a Marathi version too and is written from the Advaitic standpoint, with sections devoted to the criticism of Rāmānuja and Madhva.[33] At Kāñcī flourished in the 19th century the Sannyāsin named Upaniṣad Brahman, a Math and a Ms. library being known after him at that place; to this recluse we owe a systematic exposition of the 108 Upaniṣads,[34] which gave him his name, and commentaries on other standard philosophical and religious works like the *Gītā*.[35] Upaniṣad Brahman was also interested in music and as a devotee of the cult of Rāmanāman, had affiliations with the Telugu composer Tyāgarāja and the Sanskrit composer Muttusvāmi Dīkṣitar.[36]

A new school of thought effecting a synthesis of Sāṅkhya-Yoga-Vedānta and designated *Anubhavādvaita* was adumbrated by a very recent Tamil author, Appayyācārya (died 1901 A.D.), who wrote on his philosophy a large number of works in Sanskrit[37] and a few in Tamil too.

Vaiṣṇavite learned families kept up their literary activities at their renowned centres like Tirupati, Kāñcī, Nāvalpākkam, Śrī-muṣṇam, Kumbhakoṇam and Śrīraṅgam. The Prativādibhayaṅ-karas and Kumāratātācāryas of Kāñcī, the Vīravallis of Śrī-muṣṇam, were all quite prolific. A few examples may be cited in this branch: A Kandāḍa Appakoṇḍācārya is known to have written sixty works on Viśiṣṭādvaita, Vaiṣṇavism and criticisms of Advaita.[38] One Campakeśa likewise produced a host of Vādas on behalf of Viśiṣṭādvaita, criticising both Śaṅkara and Madhva.[39]

32. *NCC.* I. 271a.
33. Published by the Adyar Library.
34. Published by the Adyar Library.
35. Published by the Adyar Library.
36. A separate paper on Upaniṣad Brahman's contribution to Music was read by me at the 18th All-India Oriental Conference at Annamalai University, 1955; the paper will appear in the *Journal of the Madras Music Academy.*
37. See *NCC.* I. 194-95.
38. *NCC.* I. 193a.
39. *Vādārthamālā*, etc., Madras Govt. Ori. Mss. Library.

The form that the obsequies should take for a *Prapanna* or one who had duly surrendered himself unto God according to Vaiṣṇavite prescriptions, whether it should be *Sapiṇḍīkaraṇa* or *Nārāyaṇabali,* was made the subject of a controversy and presented in the form of a drama by one Ghaṭṭa Śeṣārya (the *Prapanna-Sapiṇḍīkaraṇanirāsa*).[40]

Malabar

Among local courts that handed down the tradition of Sanskrit unbroken to modern days, the Malabar States of Cochin, Calicut and Travancore occupy a very prominent place. The intense activity of Sanskrit scholars on the west coast has rendered the people of that part of the country, in all its rungs, saturated with Sanskrit to a degree not to be seen elsewhere, and scholarship among royalty itself has a long history there going up to Kulaśekhara.

When our period opens, the Kerala literary field was shining bright with the manifold and numerous productions of a Nampiyār poet named Rāma Pāṇivāda[41] who was patronised by Devanārāyaṇa of Ampalapuzha, Mārtāṇḍa Varma of Travancore and other Kerala chiefs. Two special features of Rāma Pāṇivāda's work are the efforts to bring the study of Prākṛt to prominence by his Prākṛt poems *Kaṁsavaho*[42] and *Usāniruddha*[43] and by a fresh commentary on the *Prākṛta Prakāśa;*[44] and the strengthening of the minor and less represented class of Sanskrit drama like the *Vīthī* and the *Prahasana.*[45]

During this period, the exploits of Mārtāṇḍa Varmā, maker of modern Travancore, culminating in the dedication of the State to God Padmanābha was dramatised by poet Devarāja.[46] Kārttika

40. M.D. 12548.
41. His works are being published regularly in the *Journal of the University Manuscripts Library,* Trivandrum.
42. Ed. A. N. Upadhye, 1940.
43. Ptd. Adyar Library, 1943.
44. Ptd. Adyar Library, 1946.
45. *Līlāvatī,* Pub. *J. Trav. Uni. Mss. Lib.* vol. III; *Candrikā,* Pub: *Bull. Rama Varma Res. Inst.,* Trichur, 1934; *Madanaketucarita,* (Prahasana), Trivandrum, 1948.
46. *Bālamārtāṇḍavijaya,* TSS. 108.

Tirunāl, author of the Nāṭya work *Bālarāmabharata*[47] mentioned elsewhere, patronised Sadāśiva Dīkṣita who wrote the *Rāmavarma Yaśobhūṣaṇa*[48] and *Lakṣmīkalyāṇa,*[49] Kalyāṇasubrahmaṇya (*Alaṅkārakaustubha*),[50] Veṅkaṭasubrahmaṇya (*Vasulakṣmīkalyāṇa*),[51] Subrahmaṇya (*Padmanābhavijaya*)[52] and Sītārāma (*Bālarāmavijaya*).[53] The Maharaja was a student of Portuguese and had an English-Portuguese-Malayalam glossary prepared. His neice's son, Aśvatī Tirunāl (1755-1795) wrote the *Rukmiṇīpariṇaya*[54] *Śṛṅgārasudhākarabhāṇa*[55] etc.

Svāti Tirunāl, noticed under music, wrote devotional poems on Padmanābha and His shrine at Trivandrum.[56] Rāmasvāmi Śāstri of Ilattūr in Travancore (1823) was a prolific writer; his *Kīrtivilāsa Campū* is on Āyilyam Tirunāl, *Surūparāghava,* a grammatical poem like *Bhaṭṭikāvya, Kaivalyavallīpariṇaya,* an allegorical philosophical play like the *Prabodhacandrodaya,* and *Kṣetratattvadīpikā*[57] a work on geometry. His pupil Sundararāja was as prolific and versatile, and one of his best-known works is the one-act play on the triumph of the daughter-in-law against the mother-in-law, the *Snuṣāvijaya.*[58] Keralavarma Valiya Koil Tampurān (born 1845) composed several hymns and poems, and when king Āyilyam Tirunāl interned him, gave vent to his feelings of dislike against the king in many pieces, and after release wrote the *Viśākhavijaya*[59] on Viśākham Tirunāl. Rājarāja Varma, among the graduate Sanskritists, distinguished himself by his *Āṅgalasāmrājya,*[60] by an adaptation of *Othello,*[61] and more than

47. *TSS.* 118.
48. GD. 1739.
49. *Ib.*, 1572-3.
50. *Ib.* 1324.
51. *Ib.* 1576.
52. *Ib.* 1836.
53. TCD. 1246.
54. Kāvyamālā 40.
55. Ptd. *J. of the Trav. Uni. Mss. Library.*
56. *Padmanābha Śataka,* Ptd. *J. of the Trav. Univ. Mss. Lib.*; *Syānandūrapuravarṇana Prabandha,* Ptd. Trivandrum, 1920.
57. Ptd. 1823.
58. Ed. by me with a gloss in the *Annals of Oriental Research,* University of Madras, Vol. VII. pt. i. 1942-43.
59. Ptd. Trivandrum.
60 and 61. Ptd. Trivandrum.

all these by his grammatical work *Laghu Paṇinīya*[62] and the Malayalam *Kerala Pāṇinīya*. With MM. T. Ganapati Sastri, author of much in the traditional style and the well-known Curator-Editor of the Travancore Manuscripts Library, we have the fusion of the old and the new, of the Pandit and the Research-scholar.

Under Kerala Varma of Quilon, Śaṅkara wrote the *Kṛṣṇa-vijaya*.[63]

Cochin did not lag behind. During the time of Rāma Varma, Ārūr Bhaṭṭatiri (1830) wrote the *Uttara Naiṣadha*;[64] Vīrakerala Varma, king in 1809-28, was an author of hymns; Goda Varma Yuvarāja of Cranganore was master of Śāstra and Kāvya, his monologue, *Rasasadana Bhāṇa*,[65] being his best known work; his *Rāmacarita* was completed by Koccuṇṇi Tampurān (1855-1926) who wrote also Goda Varman's life in *Vidvad-Yuvarāja Carita*;[66] Kuññikkuṭṭan Tampurān of Cranganore wrote also one-act plays and a life of Śaṅkara. The *Mahiṣamaṅgala Bhāṇa*[67] was produced in the time of Rājarāja Varman by the Nambūdiri of Mahiṣamaṅgalam.

Mysore

In the Kannada country, the most noteworthy work produced during this period is the valuable thesaurus called *Śivatattva-ratnākara*[68] compiled in 1709-10 by Basava Nāyak of Ikkeri (1698-1715), who figures also as the compiler of a poetic anthology called *Subhāṣitasuradruma*;[69] Basava's thesaurus was based on the *Mānasollāsa* of Cālukya Someśvara of Kalyan, but excels it in the richness of its contents. Next in importance is the literary activity of Nañjarāja and the poets attached to him. Kalale Nañjarāja, who started his career as Sarvādhikāri of Kṛṣṇarāja II of Mysore (1734-66), was a devout Śaiva and most of the eighteen works ascribed to him relate to Śiva. His best

62. edn. 1913, Trichinopoly.
63. Ptd. Trichur.
64. MD. 11455.
65. Kāvyamālā, 37.
66. Ptd. Ernakulam, Sāhitya Pariṣat Traimāsikam, XI, XII.
67. Ptd. Palghat, 1880.
68. Ptd. Mangalore, 1927.
69. MD. 1835; Mysore I. pp. 290, 638.

known work is the *Saṅgītagaṅgādhara*,[70] a Śaiva imitation of the *Gītagovinda* on which his protege, poet Kāśīpati, wrote a commentary. This Kāśīpati was a poet of an order of merit not quite common at this period of Sanskrit poetry and his monologue *Mukundānanda*[71] shows his ability well. Two other poets patronised by Nañja were Narasiṁha styled neo-Kālidāsa and Āluri Tirumala styled neo-Bhavabhūti; the former produced the work of rhetoric *Nañjarāja Yaśobhūṣaṇa*[72] glorifying his patron. A number of poems and works of poetics connected with the different Kṛṣṇarājas of Mysore and other princes and nobles of Mysore court are known. Pradhāni Veṅkayāmātya (*c.* 1763-80) wrote the *Alaṅkāramaṇidarpaṇa*.[73] Ahobala Nṛsiṁha wrote an *Abhinava Kādambarī* under a Kṛṣṇarāja.[74] Rāmakṛṣṇa Śāstrin produced the *Bhuvanapradīpikā*[75] under Kṛṣṇarāja Wodayar III, an encyclopaedia containing contemporary historical material also. Under the same king flourished Bhāgavata Kṛṣṇa, writer in both Sanskrit and Kannada. More recently the pontiff of the Parakāla Mutt, Mysore, Śrīkṛṣṇa Tantra (1839-1916) wrote an extensive Alaṅkāra work, the *Alaṅkāramaṇihāra*.[76]

The *Sacchūdrācāranirṇaya*[77] of the time of Cikkadevarāya, son of Doḍḍadevarāja, is an example of works in Dharmaśāstra.

More than all these fields, philosophy witnessed some vigorous cultivation in Mysore, Melkote and Śṛṅgeri; controversy was very keen between the Viśiṣṭādvaitins and Advaitins. Kunigal Rāma Śāstri (born 1807), father of the well-known Abhinava Nṛsiṁhabhāratī Svāmin, who was on the Śṛṅgeri Pīṭha recently and was himself a hymnist in Sanskrit, was the most prominent Advaitic protogonist, and Anantālvār[78] of Melkote (1822-62), the leading Vaiṣṇavite dialectician. There is a manuscript record also of an official debate between these two in the presence of the Pontiff of the Parakāla Mutt, relating to the inference used to

70. Ptd. Belgaum.
71. Kāvyamālā, 16.
72. GOS. 47.
73. *NCC.* I. 295b.
74. *Ib.* 223a.
75. Mysore Arch. Rep., 1918, p. 68, para 145.
76. Pub. Mysore Oriental Library Series.
77. Mysore I. p. 133.
78. *NCC.* I. 142-144.

establish the Advaitic doctrine of Mithyātva.[79] Author of numerous Vādas and tracts, Anantālvār criticised[80] Rāma Śāstrin's *Śatakoṭi*[81] in Nyāya and was replied to in the *Śatakoṭimaṇḍana*[82] by Gopāla Tātācārya. Tirupputkuli Kṛṣṇa Tātācārya criticised the *Śatakoṭi* in his *Khaṇḍana*,[83] and in his *Khaṇḍanamuṇḍana*,[84] Sokkattūr Vijayarāghavācārya defended the *Śatakoṭi*. Anantālvār's *Nyāyabhāskara*[85] met with a reply in the *Nyāyenduśekhara*[86] of Rāju Śāstrin, already mentioned. An elder writer of Rāma Śāstrin's time whom he first resorted to as guru was Tryambaka Śāstrin who wrote the *Bhāṣyabhānuprabhā*,[87] *Śrutimatoddyota*,[88] the *Advaitasiddhāntavaijayantī*,[89] and several other tracts.[90] Other writers on the Viśiṣṭādvaitic side were Āṇḍān Śrīnivāsa who wrote the *Sahasrakiraṇī*[91] on Vedāntadeśika's *Śatadūṣaṇī*; on the dialectics relating to the name Nārāyaṇa, which has an appreciable corpus of literature of its own, Rāma Śāstrin wrote his Śaivite *Navakoṭi*[92] and Aṇṇaṅgarācārya of Śeṣa family wrote the *Daśakoṭi*[93] in reply to Rāma Śāstrin. Alasiṅga Bhaṭṭa of Melkote wrote poems and philosophical works in the 19th century.[94] Kauśika Rāmānujācārya of Seringapatam attempted Vaiṣṇavite interpretations in his *Atharvaśikhāvilāsa*.[95]

Jainism flourished at Sravanabelgola especially and Abhinavacārukīrti Paṇḍitācārya[96] of the Jain Mutt here, in the reign of Kṛṣṇarāja Wodayar III, who wrote the *Prameyaratnālaṅkāra* etc., is a considerable writer.

79. MT. 93(d).
80. MD. 4306-7.
81. MD. 4305.
82. MT. 3669.
83. MD. 4307.
84. MD. 4308.
85. Ptd. Conjeevaram, 1924.
86. Ptd. Kumbhakonam, 1915.
87. Adyar D. IX. 979.
88. MD. 15286.
89. Ptd. Vani Vilas Press, 1916.
90. For mss. of these see Mysore and Madras catalogues.
91. MD. 5044.
92. MD. 5081.
93. *MT*. 849.
94. *NCC*. I. 300b.
95. *Ib*. 87-8.
96. *NCC*. I. 226-7.

Andhra

The greater contribution of Andhra to Sanskrit literature has been during the times of the Kākatīyas, the Reḍḍis, the Nāyuḍus and the Rāyas; after the fall of Vijayanagar, and the rise into some prominence of the principalities of Tanjore and other outposts of that empire, many Andhra learned families spread themselves out all over the South; some of them went to West Indian centres seeking Mahratta patronage, and some to Banaras. Those that remained at home were however neither few nor less productive. They attached themselves to local chiefs and zamindars or Brahman nobles and went on producing Sanskrit works, plays, hymns, panegyrics and rhetorical treatises in honour of their patrons. Some families specialised in philosophical pursuits, grammar, jyotiṣa and other technical studies. E.g.: Kollūri Rājaśekhara (18th cent.) patronised by Anipiṇḍi Rāmeśvara wrote poems and Alaṅkāra works *Sāhitya-kalpadruma*[97] etc. Kotikalapūḍi Kodaṇḍarāmārya, priest of Raṅgarāya, Raja of Bobbili, was an astronomer and wrote the *Daivajña-kalpalatā*[98] and *Āryabhaṭatantragaṇita.*[99] Toḍakamalli Kṛṣṇarāya of Kārveṭinagar and author of *Dṛggaṇita*[100] collaborated with Raghunātha, the author of what came to be known as the *Nuṅgambākkam Calendar.* Rāyalūri Kandālārya, author of *Alaṅkāra-śiromaṇi (-bhūṣaṇa)* was patronised by Veṅkaṭareḍḍi of Pākanāḍu.[101] The *Alaṅkāramañjarī*[102] is in praise of the Zamindar of Kākarlapūḍi. Rāma, author of a Śaivite work *Siddhānta-saṅgraha,*[103] and Kṛṣṇadāsa Gāṅgeya Sūri, author of *Sātrājitī-pariṇaya,*[104] flourished under Śobhanādri Appa Rao, Zamindar of Nuzvid. *Vibhaktivilāsa* is a grammatical poem eulogising Vijayarāma, Zamindar of Pūsapāḍi family.[105] The Gajapatis of the Vizianagaram house were generous patrons; *Smṛtidarpaṇa* by Yogi Praharāja[106] was produced under Rāmacandra Gajapati; Hari-

97. MT. 2126(a).
98. MT. 5262.
99. MT. 371(o).
100. MD. 13429.
101. *NCC.* I. 297a.
102. *Ib.* 295a.
103. MT. 1645(b).
104. MT. 1978.
105. MT. 2979.
106. MT. 2799.

śarman patronised by Vijayarāma Gajapati and Ānanda Gajapati produced commentaries on the grammatical works, the *Śabdaratna* and the *Paribhāṣenduśekhara*.[107] Under the same Ānanda Gajapati, Viśvanātha Daṇḍibhaṭṭa wrote a commentary[108] on another work of Nāgeśa, *Laghuśabdenduśekhara*.

One department of the Telugu Sanskrit activity in this period is somewhat striking and important; in the latter part of the 18th century arose a whole family and school of lexicographers comprising more than a dozen writers who wrote about thirty lexica, specialising in giving rare synonyms, slightly different forms of the same word and varieties of gender permitted; one of them, Śrīharṣa, was very forward and presumed to attack the *Amarakośa* in his *Amarakhaṇḍana* and was replied to by Śāntalūri Kṛṣṇa Sūri who came a little later.[109]

Certain Vaiṣṇava families settled in the Telugu area made noteworthy contributions to Viśiṣṭādvaitic literature. The Tirumala Bukkapaṭṭanam family which later settled down at Surapuram or Shorapur figuring much in Col. Medows Taylor's writings and situated in the present Gulbarga District of the Hyderabad State, distinguished itself by continuous literary output for four generations. These Surapuram Vaiṣṇava writers came to that place first in 1760-66 and their varied literary activity which continued upto 1825 comprises many treatises of dialectic value, attacking both Advaita and Dvaita, and poems, plays and hymns.[110]

A considerable amount of facile Sanskrit poetry continued to be produced always in Andhra, and few indeed are the leading Telugu writers of modern times who have not also been well equipped in Sanskrit; but one stupendous effort of modern Sanskrit scholarship in Andhra should be singled out for mention, the encyclopaedia called *Śabdārthasarvasva* by Paravastu Veṅkaṭa

107. MT. 1768; MT. 1767.

108. MT. 3328.

109. See my edition of the *Amaramaṇḍana* of Kṛṣṇa Sūri, Deccan College Res. Inst., Poona. In the Introduction here, I have given an account of this lexicographical literature.

110. See my paper on the Surapuram chiefs and the Sanskrit writers patronised by them in the *J. of the Andhra Historical Res. Society*, Rajahmundry, vol. 13, pp. 11-33, 91-92.

Raṅgācārya of Vizagapatam;[111] This thesaurus compiled almost contemporaneously with the Bengali efforts *Śabdakalpadruma* and *Vācaspatya*, has however been unfortunately in manuscript.

Mahārāṣṭra

The Peshvas of Mahārāṣṭra liberally encouraged Sanskrit literature and it is out of the accumulation of the funds they had set apart for distribution as *dakṣiṇā* that the modern institutions of Poona, the Deccan College and then the present Research Institute of that name were founded. In 1746, under Sāhu, Śivadīkṣita, descendent of the *Mahābhārata*-commentator Nīlakaṇṭha, wrote the *Dharma-tattvaprakāśa* and Tryambaka Bhaṭṭa, the *Pratiṣṭhendu*. Jagannātha, a Tanjore poet of Pratāpasiṁha's time, was commissioned to write the *Śaṅkaravilāsa Campū* by Nānā Saheb Peshva, about 1760.[112] In 1765, on the order of Raghunatha Rao Peshva, Raṅga Jyotirvid of Junnar in Poona District wrote a medical treatise on piles called the *Vicārasudhākara*, and thanks to him, we know of a number of a doctors and astrologer-astronomers of these Peshva times.[113] The *Alaṅkāramañjūṣā*[114] in poetics by Devaśaṅkara glorifies the Peshvas Mādhava Rao I (1761-32) and his uncle Raghunātha Rao; Devaśaṅkara was also connected with Viśvāsa Rao on whom he has left several verses. Mādhava Rao patronised also Sacalamiśra, chief of the Dharma Sahbā in Bihar.[115]

In the beginning of the 19th century, Rāghava Āpā Khāṇḍekar flourished at the well-known Mahārāṣṭra centre of learning Puṇyastambha and wrote the lexicon *Kośāvataṁsa*, the jyotiṣa works *Kheṭakṛti*, the *Paddhaticandrikā* and the *Pañcāṅgārka*, and the literary work *Kṛṣṇavilāsa*.[116] More prolific was his Pañcavaṭī contemporary Acyutarāya Modak, who made varied contribution to poetry, poetics, religion and Advaita philosophy, nearly thirty works of his being known.[117] The Tanjore Kannaḍiga authors

111. For an account of it, see *Journal of the S.V.O. Inst.*, Tirupati, VII. 2; VIII. 2; IX. 2; X. 1, 2.

112. See Poets of the Peshva Period, Gode, *Bharatiya Itihasa Samsodhan Mandal Journal*, 18.2, pp. 46-9.

113. Gode, *ABORI*, XII. 287-89.

114. *Scindia Oriental Series*, 1 (1940).

115. See Introduction to *Vidyākarasāhasraka*, Allahabad, 1942.

116. Gode, *ABORI*. XXIV. 27-44.

117. See *NCC*. I. 59-60.

Vāñcchesvara and his great-grandson and namesake received patronage at Poona too; the latter received help at the hands of the Patwardhan Sardars and their ministers,[118] and is well-known for his Mīmāṁsā work *Bhāṭṭacintāmaṇi;*[119] he wrote also on Dharma and Śrauta. In Nagpur flourished the poet Gaṅgādhara (1860-65) who produced eighteen works including two *Gītagovinda*-imitations *Saṅgītarāghava* and *Gaṅgāṣṭapadī.*[120] Advaitendra Yati (1780) author of *Dharmanaukā,* flourished near Ahmednagar.[121] Raghunātha Śāstri Parvate wrote a commentary on the *Gītā* called the *Padabhūṣaṇa* and then the advaitic polemic against Dvaita, the *Śāṅkarapādabhūṣana*[122] in 1848, under the patronage of Nānā Saheb, Minister at Bhor.

Jaipur, Rewa, Bikaner

Jaipur had not been less conspicuous during this period and its literary activity continued to modern times when its Sanskrit College staff contributed regularly to the *Kāvyamālā Series.* Sevai Jaisingh (1699-1744) who performed an Aśvamedha sometime between the years 1713 and 1742,[123] patronised a number of authors.[124] Ratnākara compiled the Dharmaśāstra digest *Jayasiṁhakalpadruma* (completed in 1713),[125] and Sadāśiva Daśaputra, his *Ācārasmṛticandrikā.*[126] Vrajanātha, son of Prabhākara, the brother of Raghunātha, patronised by the same King and his son Madhosingh composed the anthology *Padyataraṅgiṇī.*[127] Vrajanātha revised also *Vaidika-Vaiṣṇava-Sadācāra* of Harikṛṣṇa[128] written at Jaisingh's instance. The *Mādhvasiṁhāryaśataka* is an eulogy on the latter king by Śyāma Laṭṭu dated 1755, and men-

118. P. K. Gode, *Studies in Indian Literary History,* II. 499 ff.
119. Ptd. Madras, 1928.
120. *I.H.Q.* 25. pp. 100-1 and *ABORI.* XXX. 31-42.
121. *NCC.* I. 108b.
122. *An.S.S.* 101, 2 parts. See also Gode, *Annamalai Chettiar Commemoration Volume,* 197-206.
123. vide *Arch. Rep. of Jaipur State,* 1936-37 and 1937-38, pp. 4-5, plate 17 (c) for the Yajñastambha of Jaisingh. See also P. K. Gode, *Studies in Indian Literary History,* II. 292 ff.
124. See Gode, *ibid.* II. 275 ff.
125. Ptd. Bombay, 1925.
126. BORI. 236 of 1887-91.
127. BORI. 724 and 725 of 1886-92; 421 of 1887-91.
128. BORI. 443 of 1891-95.

tions quite a good number of scholars of the court.[129] At Jaipur flourished a family of Telugus, probably connected with the famous Paṇḍitarāya Jagannātha and migrant there from its secondary home at Banaras, which continued its literary activity to modern times. Haribhaṭṭa of this house has left an account of their family, the *Kulaprabandha;*[130] his cousin was Kṛṣṇakavi, patronised by Jaisingh, and also at Bharatpur and Bundi; Kṛṣṇakavi wrote his *Īśvaravilāsa Kāvyā*[131] at the instance of Jaisingh's other son Īśvarasingh who committed suicide in 1751. Kṛṣṇa's other works are *Padyamuktāvalī, Sundarīstavarāja* and *Vedāntapañcaviṁśati,* and more than a dozen in Hindi. From these was descended Mathurānātha, the modern poet and scholar of the Jaipur Sanskrit College.[132] In the line of Ratnākara appeared Viśveśvara who composed between 1788-1803 the digest *Nirṇayakaustubha,* as also the *Pratāpārka.*[133] Ananta produced under Pratāpasiṁha the medical work *Pratāpakalpadruma* in 1792.[134] One Hariścandra produced the *Dharmasaṅgraha* by order of Rāmasiṁha of Jaipur (mid. 19th century).[135]

In the history of Sanskrit at Rewa, the most noteworthy figure was the ruler Viśvanātha Siṁha Vāghela himself (1813-54) in whose name fifty works are found; Viśvanātha was an ardent devoteee of Rāma and enriched the Rāma cult with varied literature, exposition of the details of Rāma worship, poems, songs and musical plays.[136]

Of the works that arose under the benevolence of the Bikaner rulers, mention may be made of the *Ānandalaharī* of Āśānanda of Multan, a Śākta hymn, written under Gajasinghji 1745-1787;[137] a curious playlike writing in six languages, Sanskrit and Prākṛt called the *Ṣaḍbhāṣāmayapatra* by Rūpacandra was written under Sujansinghji (1690-1735).[138]

129. Patkar, *Poona Orientalist,* I. iv. pp. 34-7.
130. See *Sāhityavaibhava* of Pt. Mathurānātha of Jaipur, 1930.
131. P. K. Gode, *Studies in Indian Literary History,* II. 279ff.
132. *Gīthivīthī,* Bombay, 1929; *Sāhityavaibhava,* Jaipur, 1930; *Jayapuravaibhava,* Jaipur, 1947.
133. P. K. Gode, *Studies in Indian Literary History,* II. 299.
134. *Poona Orientalist* III. pp. 86-7.
135. P. K. Gode, *Ib.* p. 303
136. P. K. Gode, *Ib.* p. 242 ff.
137. *Adyar Lib. Bulletin,* XII. 1948. 206-08.
138. *Ibid.* X. 1946. 239-40. The manuscript is dated 1730.

Kashmir

In Kashmir, the reign of Raṇavīra Singh (ascended 1857) witnessed a great amount of Sanskrit enthusiasm.[139] Śivaśaṅkara compiled at this time the Dharmaśāstra digest, *Raṇavīraratnākara;* in Vedānta Vāsudeva wrote the *Cittapradīpa;* Gaṇeśa of Jammu wrote the *Viṣaharatantra* in medicine, and Lāla Paṇḍita, the *Praśnaratnāvalī* in Jyotiṣa. This King appears as the sponsor of no less than thirty-two works in all branches of Sankrit literature. His chief Pandit Sahibram wrote, among others, a commentary on the *Pañcasāyaka* on erotics. Viśveśvara of the same court produced an encyclopaedia called *Raṇavīravijaya* and a treatise on prognostication derived from Muhammadan sources called the *Skandhāsthipraśna;* and the *Bhūpālavilāsa* of Śivarāma is another interesting work of the same time dealing with different topics of royal interest and games and amusements.

Banaras

Many important writers associated with Banaras have been dealt with elsewhere in this paper. Beyond that, it is not possible to make any separate mention of Banaras-authors and their contributions: the continuous history of Sanskrit activity can be seen here in the period we are surveying in the very middle of which (1791) the Government Sanskrit College was founded and some of the outstanding Pandits carried on their literary activities under the new set-up. The Sanskrit traditions of Banaras still endure.

Mithila

In the modern times, Mithila had been the home of logic and Dharmaśāstra; and poetry and poetics too were in evidence there. The Sanskrit activity became intense particularly after the foundation by Pandit Maheśa Ṭhakkura of the present Brahman principality of Darbhanga. Acala, Macala and Sacala were logicians in the 18th century Mithila. Under Rāghavasiṁha of Nānyadeva's Karṇāṭa dynasty of Mithila, Kalyāṇa wrote on Dharma; Kṛpārāma Tarkavāgīśa wrote the *Navyadharmapradīpa* in 1764-5.[140] A more im-

139. See Stein, Introduction to the *Catalogue of Sanskrit Manuscripts at Jammu* and Introduction to *A Descriptive Catalogue of Sanskrit Manuscripts in the Private Library of H. H. the Maharajah of Jammu and Kashmir.*
140. *J. G. Jha Res. I.* IV. p. 307.

portant author of the same court was Gokulanātha of Mangrouni, who besides commenting on a Nyāya classic, produced the well-known allegorical play on the doctrines and philosophy of the Nyāya system, the *Amṛtodaya*.[141] From the same place hailed Citradāsa of the end of the 18th century, author of a number of works; Citrapati Śarmā of the same time was a Mīmāṁsaka and Dharmaśāstra writer. Vidyākara Purohita's anthology, *Vidyākarasahasraka*,[142] preserves verses of some of the local authors, besides the ancients; it was completed by Apūccha Jhā, a poet and Jyotiṣa writer of the 19th century; Rūpanātha was a Maithila poet of the 19th century whose *Rāmavijaya* has been printed.

Bengal

Among the Bengali authors again a large number of poets, logicians, philosophers and authorities on Dharma and Tantra are known. In fact, Bengal became in these centuries celebrated for its activities especially in Dharma Śāstra and Navya-nyāya, and in the latter field, Navadvīpa or Nadia, the birthplace of Caitanya where Raghunātha Śiromaṇi founded a school of logic, became a centre that attracted students of Navya-nyāya from all parts of the country. Bengali chiefs, of Nadia, Burdwan, etc., and aristocracy extended generous patronage of Sanskrit writers. The most famous of these patrons are those connected with the ruling house of Nadia.

Under Maharaja Kṛṣṇacandra of Nadia (1728-82) was Rāmānanda (*c.* 1759) who wrote on Advaita, Dharma, Śākta, Sāṅkhya, music and Vāstu;[143] Mādhavacandra wrote on lexicography.[144] Under Kṛṣṇacandra's father, Raja Raghurāma of Nadia, Kṛṣṇasārvabhauma wrote the poem *Padāṅkadūta*. Among Pandits who did the *Vidvadārṇavasetu* for Warren Hastings was Bāṇeśvara, of Guptapalli in Hoogly District, who enjoyed patronage under Kṛṣṇacandra of Nadia, Nawab Alivardi Khan of Murshidabad, Citrasena of Burdwan and Navakṛṣṇa of Sobhabazar. Bāṇeśvara

141. *Kāvyamālā* 59.
142. Edn. Umesh Misra, Allahabad. See the Introduction in the above on other authors noticed here.
143. H. P. Sastri's *Reports*, 1901-6, p. 10.
144. *Ib.*, p. 10.

wrote hymns, a century of verses on Banaras, an epic *Rahasyāmṛta*, and two works at Citrasena's instance, the *Citrābhiṣeka* and *Citracampū*,[145] the latter containing historical and geographical material. Along with Bāṇeśvara in Kṛṣṇacandra's court was a large circle of scholars which comprised Harirāma Tarkasiddhānta, Kṛṣṇānanda Vācaspati, Jagannātha Tarkapañcānana and Rādhāmohana Gosvāmin.[146] Under Raja Giriścandra of Nadia flourished the prolific and versatile writer Kṛṣṇakānta (*c.* 1780) whose writings range over Nyāya, Vedānta, poetry, erotics, Śākta and hymnology.[147] The other noteworthy logicians who belonged to this famous Nadia school are Harirāma (*c.* 1730 A.D.), Rāmanārāyaṇa (*c.* 1760), Rāmanātha (*c.* 1770), Śaṅkara (*c.* 1800), his son Śivanātha, Kaśīnātha (*c.* 1820), Śrīrāma, Mādhava (*c.* 1850), Haramohana and Prasanna Tarkaratna.[148] The Nadia scholars contributed to astronomy also as evidenced by the *Jyotiṣasārasaṅgraha*[149] of Rāmarudra (born 1718). Raghudeva the logician, guru also of Cirañjīvibhaṭṭācārya, wrote in 1711 A.D. the Dharma Śāstra work *Dinasaṅgraha*,[150] on auspicious days for religious observances. Cirañjīvibhaṭṭācārya (*c.* 1700) wrote besides works of poetry like *Mādhava Campū*, the rhetorical treatise *Kāvyavilāsa*,[151] the *Vṛttaratnāvalī* in prosody and the *Vidvanmodataraṅginī*,[152] in dialogue style expounding all the philosophical schools.[153]

Chaitanya Vaiṣṇavism is a special branch in which some important works were produced in this period: Baladeva Vidyābhūṣaṇa of the 18th century was a poet and rhetorician but his more noteworthy contribution lay in Chaitanya Vaiṣṇavism in accordance with which he produced an exposition of the *Brahma Sūtras* called *Govindabhāṣya*,[154] as also two independent expositions

145. Edn. Banaras. See Intro. there on author, his works and his contemporaries.

146. See *Ib.* and S. C. Vidyabhushana, *History of Indian Logic*, p. 526.

147. H. P. Sastri, *Report*, 1901-6, pp. 9-16; S. C. Vidyabhushana, *ibid.*, pp. 484-5. Kṛṣṇakānta's *Upamānakhaṇḍa Cintāmaṇi-vyākhyā* is published in Bib. Ind., N. S. 844 (1897).

148. S. C. Vidyabhushana, *ibid.*, p. 526 ff.

149. *Ib.*, p. 527.

150. IO., 3030.

151. *Sarasvati Bhavana Texts*, 16.

152, Ptd. Calcutta and Bombay.

153. See also Dinesh Chandra Bhattacharya, *IHQ.*, XVII, 1-10.

154. Edn. *ASS.* 77. Translation, Panini Office, Allahabad.

of the school in his *Siddhāntaratna* with commentary[155] and the *Prameyaratnāvalī*;[156] his commentary on Rūpa Gosvāmin's *Stavamālā* is dated 1764. Viśvanātha Cakravartin (died 1754) wrote the commentary *Sārārthadarśinī* on the *Bhāgavata* in 1704 A.D., and commentaries and summaries of the works of Rūpa and Jīva.[157] Narahari Cakravartin was the author of about six works, *Bhaktiratnākara, Narottamavilāsa* etc.[158] A later Viśvanātha seems to have written in 1786 the *Kṛṣṇabhāvanāmṛta* and other Chaitanya works like the *Gaurāṅgalīlāmṛta* and the *Kṛṣṇāhnikakaumudī*.[159] Rādhāmohana Śarman (19th century) produced the *Kṛṣṇārcanacandrikā* and *Kṛṣṇabhaktisudhārṇava*.[160] Of other authors, we had Pañcānana Tarkaratna[161] who wrote the play on Mewad annals, the *Amaramaṅgala*;[162] Bhaṭṭapalli Rākhāldāsa Nyāyaratna (born 1827) who wrote the *Tattvasāra* etc., Yadunātha who wrote on *Dāyabhāga* and Kālīcaraṇa who wrote on Durgā worship.[163] Prāṇakṛṣṇa Viśvāsa (1764-1834) who was a patron residing in a place near Calcutta, was responsible for a number of works written by different writers, at his instance: the *Prāṇatoṣiṇī* (Tantra), *Prāṇakṛṣṇa-auṣadhāvalī* (medicine), *Prāṇakṛṣṇa-vaiṣṇavāmṛta* etc.[164] The medical scholar Gaṅgādhara Kavirāja (1798-1885) was a prolific writer of versatile ability; his most valuable work is a commentary, *Jalpakalpataru*, on the *Caraka Saṁhitā*.[165] The contribution of Bengal to Sanskrit in modern times cannot be complete without a reference to the two monumental encyclopaedia, the *Śabdakalpadruma* of Rādhākāntadeva and the *Vācaspatya* of Tārānātha Tarkavācaspati, both compiled on modern lines in the 19th century.

155. *Sar. Bha. Texts*, 10.
156. Sams. Sah. Pariṣat, Ser. 18.
157. Peters VI, pp. 12-14. S. K. De, *Vaishnava Faith and Movement*, p. 126 fn.
158. *Ib.*, p. 51 fn. Dinesh Chandra Sen, *Vaishnava Literature of Mediaeval Bengal*, p. 177-8.
159. De and Dasgupta, *History of Sanskrit Literature*, p. 398.
160. De, *Vaishnava Faith and Movement*, p. 104 fn.
161. On him see *ABORI.*, XXXII,, 312 ff.
162. 2nd edn., Banaras.
163. H. P. Sastri, Report, 1901-6, pp. 10-11.
164. C. Chakravarti, *ABORI.*, XI, Bengal's Contribution to Sanskrit Literature, p. 253.
165. *Ib.*, p. 254.

Some Noteworthy works in Different Branches

Besides the works noticed already in the regional survey the following contributions in the different branches of learning deserve mention. In Alaṅkara, the Appayya-Jagannātha controversy had some extension into the 18th century when partisan and impartial writers took part in it, Bhīmasena Dīkṣita (1723),[166] Baladeva Vidyābhūṣaṇa (1765) and Nāgoji, the last of whom commented on the works of both Appayya and Jagannātha. Gaṅgārāma Jaḍī[167] wrote the *Rasamīmāṁsā* and a commentary *Naukā* on the *Rasataraṅgiṇī* (1742). Śivarāma Tripāṭhin,[168] later than Nāgeśa, commented on *Kāvyaprakāśa* and wrote the *Rasaratnahāra* and *Alaṅkārasamudgaka;* Śivarāma wrote about ten works including commentaries on Bāṇa and Daṇḍin. Acyutarāya Moḍak, already mentioned among Mahārāṣṭras, adopted some unauthorised innovations in his *Sāhityasāra.* More useful are the works of a really important poet and rhetorician of this period (18th century), Viśveśvara of Kūrmācala (Kumaon), who, for a brief life of thirty-four years, made a really striking literary contribution: his three works on figures of speech, *Alaṅkārakaustubha*[169] etc., are noteworthy for minute discussions of the definitions of the figures; the *Rasācandrikā*[170] is a notable work on Rasas; and among his original compositions, mention must be made of his Prākṛt play (saṭṭaka) called *Śṛṅgāramañjarī.*

This period is of special significance for grammar; for some of the works produced in that field during this period, the *Bālamanoramā* from Tanjore and the many works of Nāgoji Bhaṭṭa in the North, became part and parcel of the curricula of grammar studies. Nāgoji Bhaṭṭa was a Mahārāṣṭra of Kale family patronised by the chief Rāma of Śṛṅgiberapura on the Ganges near Allahabad in the beginning of the 18th century. There is hardly a single Sanskrit work that was in vogue or was in the curriculam of Sanskrit studies on which Nāgoji Bhaṭṭa did not comment. His contributions to Dharma Śāstra are referred to elsewhere; those in the

166. *Kuvalayānanda-khaṇḍana,* L. 4084.

167. See Devasthali, *J. of the University of Bombay,* XI, ii, 84-9.

168. c. 1700-1775; on his works see Gode, *Adyar Library Bulletin,* XV, pt. 2, pp. 62-67.

169. *Kāvyamālā,* 66.

170. Ptd. Chowkhamba Skt. Series.

field of rhetoric have already been touched upon. In religion he commented on the main texts of daily devoted study, the *Vālmīki Rāmāyaṇa*, the *Adhyātma Rāmāyaṇa*, the *Devī Māhātmya* etc. In grammar he belongs to the line of direct disciples from Bhaṭṭoji Dīkṣita; besides producing super-commentaries on the *Mahābhāṣya* and the *Kaumudī* of Bhaṭṭoji, he exponded also the Paribhāṣās and the philosophy of grammar, all of which still form part of a complete Vyākaraṇa course. His pupil was Vaidyanātha Pāyaguṇḍa who commented on most of the grammatical writings of his teacher: *Chāyā* on the *Uddyota* on *Mahābhāṣya*, *Gadā* on the *Paribhāṣenduśekhara*, *Kalā* on the *Vaiyākaraṇasiddhāntamañjūṣā* and *Cidasthimālā* on the *Śabdenduśekhara*. Śivarāma Tripāṭhin also, referred to above, commented on Bhaṭṭoji's *Kaumudī* and compiled a lexicon of Uṇādis. Bhairava Miśra of Prayāg, commented on Nāgeśa's works; and other commentaries on Nāgeśa have been mentioned above while noticing works of Andhra. Mauni Jayakṛṣṇa Bhaṭṭa is another grammarian of the post-Nāgeśa period, who wrote the *Sphoṭacandrikā*, the *Lakhuvibhaktyarthanirṇaya* and the *Vṛttidīpikā* on philosophical and semantical aspects.[171]

In logic, the Mithila and Bengal contributions have been separately referred to. Some of the other logicians of this period are[172] Gaṅgārāma Jaḍi who commented on Jagadīśa's *Tarkāmṛta*, Kṛṣṇa Bhaṭṭa Ārde (18th century) commentator on Gadādhara's works, Gaurīkānta Sārvabhauma who commented on *Tarkabhāṣā* (c. 1725), Rudrarāma, son of Bhavānanda (c. 1780), Mahādeva Puṇatāmkara (1795) and Nīlakaṇṭha commentator on *Tarkasaṅgraha*. Śivacandra (19th cent.) wrote, besides a negation of Abhāva or non-existence as a category, a work called *Adhyātmacaṇḍī*.[173] The process of inference was depicted by Nṛsimha Kavi of Triplicane, Madras, in the form of a drama with abstract concepts as characters.[174]

In Mīmāṁsā, some contributions of Tanjore have been alluded to above. Rāmeśvara of Banaras wrote the *Vidhiviveka* and a gloss on the *Sūtras*. Earlier, c. 1750 probably, flourished the important writer Rāmānujācārya, of Dharmapuri on the Godavari, who wrote

171. *J. Oriental Institute, Baroda*, II, 3, pp. 243-38.
172. See S. C. Vidyabhushan, *History of Indian Logic*, pp. 478-87.
173. *NCC.*, I, pp. 366a, 373b.
174. *Ib.*, I, p. 160.

the *Tantrarahasya*[175] on the Prābhākara school and the *Nāyaka-ratna,* a gloss in Bhāṭṭa school.

Some noteworthy works in Advaita and Viśiṣṭādvaita have already been mentioned. The Dvaita Vedānta writers of this period[176] are from the ranks of both the pontiffs and the lay adherents of that school: Jagannātha Tīrtha (c. 1715-30), Vādīndra (1728-43) and Satyadharma of Uttarādi Mutt (1769-1830) are of the former class: among writers of the latter class are to be mentioned Vedagarbha Padmanābhācārya (c. 18th cent.) who wrote a compendium of Madhva philosophy, *Madhvasiddhāntasāra,*[177] Raṅgappācārya and Mādhavācārya of Cochin (1820-91 and 1887-1931), and Kāśi Timmaṇācārya (1800-50).

In Vedic, it is interesting to note that one Dhīra Govinda Śarman of the beginning of the 19th century wrote on the Atharva Veda his work called *Atharvaṇarahasya.*[178]

In veterinary science, Jogarāja produced the *Aśvaphala-prakāśa* under Mahadaji Scindia (18th century).[179]

Following in the footsteps of the great Mallinātha, Kuravi Rāma[180] and the Āndhra Āvañci Rāmacandra[181] helped students with commentaries on the classical literary texts that were popularly studied.

Women Writers

The tradition of cultivation of Sanskrit by some at least among women did not disappear totally from this period. Lakhima Takurani of Mithila is being remembered in the North, and the South preserves the memory of several women writers of Sanskrit. Triveṇī (1817-83), a Vaiṣṇava lady of Śrīperumbudūr and one who engaged herself also in some public work in the religious field, composed hymns, a couple of plays, two imitations of Kālidāsa's

175. *GOS,* 24.

176. 'A History of Dvaita Literature', Dr. B. N. Krishnamurti Sarma, in Ms., Madras University Library.

177. See *Poona Orientalist,* III, pp. 75 ff.

178. *NCC.,* I, 82.

179. *Ib.,* 323.

180. See Madras and Adyar Mss. Catalogues; see N. S. Press edn. of *Campū Bhārata.*

181. See N. S. Press edns. of Bhartṛhari's *Śatakas* and the *Bhoja Campū.*

Meghasandeśa and two epic poems.[182] Sundaravallī, authoress of a *Rāmāyaṇa Campū,* hailed from Mysore. Jñānasundarī of Kumbhakonam (died 1910) was highly gifted in this line, and among three women of recent times who tred the more arduous path of mastering Śāstras, mention may be made of a Telugu Brahman lady of Māyavaram, Kāmākṣī (widowed 1871) who has left glosses on Tarka and Advaita Vedānta texts, *Nīlakaṇṭhīya-viṣayamālā, Advaitadīpikā* and *Smṛtiratnaprakāśikā.*[183] In Kerala, Manoramā Tampurāṭṭi of the Calicut Zamorin's family played some conspicuous part in scholarly as well as political affairs in the latter part of the 18th century; many males studied Sanskrit under her and several stray verses of hers are handed down. Lakṣmī, a princess of Kaḍattanāḍ (died 1900), wrote the poem *Santānagopāla,*[184] indulging in difficult chimes. Subhadrā of the Cochin royal house (1844-1921) composed devotional hymns.

History and Geography

Works of historical and biographical interest were also produced in this period. Rāma, son of Lakṣmaṇa, presented in his *Jayavaṁśa Kāvya,*[185] a history of Savai Jaisingh and his ancestors. *Cetasiṁhakāvya*[186] of Balabhadra is an account of King Chet Singh of Banaras who was later dispossessed by Warren Hastings. *Rājāvali*[187] brings its account of kings down to 1754. The *Siddhānta-vijaya*[188] deals with Pratāpaśiva, descendent of Śiva to whom the British gave Satara after 1818. The *Kavīndra-Lakṣmīnārāyaṇa-jīvanacarita*[189] on Lakṣmīnārāyaṇa of Banaras (latter half of the 19th century) is an example of the biography of a scholar. The *Moḍhaprakāśa* of Yadupati written in 1705 is another account of a scholar and his family.[190] *Kṛṣṇabhūṣaṇa Campū*[191] of the Āndhra poet Narasiṁha is the life of a Telugu merchant Kṛṣṇa of Nārkedi-

182. See M. Krishnamachariar, *History of Classical Sanskrit Literature* pp. 395-397.
183. All printed at Kumbakonam about 1910-12.
184. Ed. Trichur.
185. ASB. D. IV, 3087.
186. *Ib.* 3089; Intro., p. ii.
187. *Ib.* 3090; Intro., pp. ii, iii.
188. *Ib.* 3091; Intro., pp. ii, iii.
189. *Ib.* 3113; Intro., p. iv.
190. *Ib.* 3104.
191. MD. 12227.

malli family. The *Kavimanorañjana Campū* of Sītārāma Sūri of Tirukkuruṅguḍi in Tirunelveli Dt. (born 1836) records the itinerary of his ancestor who migrated to that district from Māmaṇḍūr near Kāñcī.[192]

Music and Dance

In music, Tanjore had taken the place of headquarters so far as the Carnatic branch was concerned; the interest of the Telugu Nayaks was continued by the Mahrathas, who enriched the Carnatic school with many Hindusthani trends, forms and rāgas. Sahaji, the most celebrated literary patron of the Mahratha dynasty is no doubt known for his music contributions too, but his last younger brother, Tulajā should be specially mentioned for his Sanskrit work on music, the *Saṅgītasārāmṛta;*[193] it is the last of the long line of regular treatises in Sanskrit on the art, literary endeavours after this becoming amorphous; evincing a greater sense of realism than its predecessor, the *Caturdaṇḍīprakāśikā* of Veṅkaṭamakhin, the *Sārāmṛta* is indeed a valuable work; its detailed descriptions of rāgas with illustrative citations are still useful, despite the fact that much change had taken place since his days and quite a different rāga scheme, with a more mechanical conception of the melodies, had been imposed on the art.

The loss on the side of musicology was more than compensated on the artistic and creative side of music, for this was indeed the golden era of the master composers of Carnatic music. No doubt, Telugu, a heritage of the Nayak times, was the main linguistic medium of the songs, but the classic language had not lost its vogue in this field. Nārāyaṇatīrtha,[194] whose exact date is not yet determined, was obviously a senior composer at the beginning of this period and his contribution takes the form of an elaborate Sanskrit operatic composition on the sports of Kṛṣṇa called the *Kṛṣṇalīlātaraṅgiṇī,*[195] still sung fully in devotional circles and in stray pieces in concerts. A more close imitation of Jayadeva, the *Śivagītimālikā,*[196] by a Pontiff of the Kāmakoṭi Pīṭha was in vogue

192. Ed. *J. of the Travancore Univ. Mss. Library.*
193. See above.
194. For an account of him, see my article in *Roopalekhā*, 1956.
195. Ptd. in Grantha and Telugu scripts.
196. Ptd. Vani Vilas Press, Srirangam.

in temples; and the Vedāntic songs of the Advaitic *avadhūta*, Sadāśiva Brahmendra, who continued to be active in the beginning of this period and became the patron-saint of the Pudukkotta principality, were a class by themselves and were always on the lips of the devout.[197] At Śrīmuṣṇam near Chidambaram, which was a centre of music and dance, a Śrīnivāsa of the Vīravalli family was a prolific Sanskrit music composer, Aṣṭapadis, padas, kīrtanas, vaṇṇas and kuravañci being mentioned among his works.[198]

Even the outstanding music composer of this age, Tyāgarāja (1759-1847), the bulk of whose songs are in Telugu, has left no negligible quantity of quite felicitous Sanskrit compositions; but the outstanding Sanskrit musician of the age is his contemporary, Muttusvāmi Dīkṣitar (1775-1835); his creations are at once examples of a stately style and esoteric spiritual lore, and not a little significant for the science and history of the art by virtue of the care that he took to label the pieces with their melody-names.

The Carnatic type of the traditional dance-art was also attaining in this age its present form and standardisation; literary material bearing on the art took mostly the form of handbooks and notes; it is therefore significant that here again, the last regular Sanskrit treatise is the *Saṅgītasārāmṛta* of King Tulajā, already mentioned; the hitherto unknown dance-chapter of this work, which has been recovered and pieced together by me, correlates the Sanskrit and local vernacular technical terms and dance-parlance. Śrīmuṣṇam Appalācārya produced a *Saṅgītasaṅgrahacintāmaṇi*, on dance, part of which has come down with Tamil translation.[199] In Andhra, we had Somaṇārya's *Nāṭyacūḍāmaṇi*, Muḍumbai Narasiṁhācārya's *Bharatārṇavasārasaṅgraha* and Śuddhasattva-Veṅkaṭācārya's *Arjunādimatasāra*.[200]

Travancore was fast linking up with Tanjore. Bālarāma Varmā, nephew of Mārtāṇḍa Varmā, the maker of modern Travancore, who succeeded to the throne in 1758 and ruled for forty years,

197. Ptd. Vani Vilas Press, Srirangam.

198. See MD. 12744.

199. Available in a manuscript in the Adyar Library. See my *'Later* Saṅgīta Literature', *J. of the Music Academy, Madras*, IV, p. 72.

200. Mss. of these are available in the Madras Govt. Ori. Mss. Library. See also my 'Later Saṅgīta Literature, *ib*., pp. 76, 80.

produced the *Bālarāmabharata*[201] which is an important treatise in the history of well-written Sanskrit treatises on dance. More famous was the Travancore King who was a contemporary of the Tanjore Musical Trinity, Svāti Tirunāl (1829-47), who, by his wide patronage and numberless compositions, put Travancore on the musical map of South India. Svāti Tirunāl was a linguist, but was mainly a Sanskrit composer; besides numberless stray pieces, he composed sustained musical poems and stories,[202] and a Sanskrit tract on the employment of alliteration in song-composition.[203]

A few Sanskrit works on the Hindustani school were produced in different and distant parts of the country, in the North. In the land of Jayadeva, the late Khimuṇḍi (Parlakhimidi) chiefs gave a fillip to musical activity. To King Nārāyaṇa of Parlakhimidi (late 18th cent.) is ascribed not only a general treatise *Saṅgītanārāyaṇa*,[204] but a special tract too on musical Alaṅkāras.[205] His guru Puruṣottama's son Nārāyaṇa wrote the *Saṅgītasaraṇi*[206] and the more noteworthy musical poems of monomelodic and multi-melodic forms on epic as well as festival themes pertaining to the local temple. Other Oriyan music works in Sanskrit which may be assigned to the same group are the Kalāṅkuranibandha[207] and the Kavicintāmaṇi[208] of Gopīnātha, son of Vāsudeva Patro, the latter of which contains a music section. The *Gītagovinda* had a special relation to Orissa, its native province, and its song and gesticulation had been, as epigraphs show, provided for at the Puri temple. Coming in this line is the work of one Lakṣmaṇa who produced the *Rasikaraṅgadā*,[209] an exposition of Jayadeva's poem in 1740, at Puri. In the middle of the 19th century Kṛṣṇānanda Vyāsa produced the *Rāgakalpadruma*, a big compilation in Sanskrit of songs and theoretical matter on music and dance. The greatest modern musicologist of North India, Pt. Bhatkhande, was

201. *TSS*. 118.
202. *Ajāmilopākhyāna*, etc. TSS. 112. *Saṅgītakṛtayaḥ*, TSS. 113.
203. *Muhanāntyaprāsa*, pub. *J. of the Trav. Uni. Mss. Library*.
204 MT. 3234.
205. *Alaṅkāracandrikā*. See my note in *ABORI*. XVI, 129-31.
206. MT. 3298.
207. See my 'Later Saṅgīta Literature', *J. of the Music Academy*, Madras, IV, p. 74.
208. MT. 2925.
209. MT. 2904.

already active in the latter part of the 19th century, though his Sanskrit treatise, *Lakṣyasaṅgīta* was published only in this century.

Dharma Śāstra

The activity in the field of Dharma Śāstra has some special significance as, very soon, the British administration had to establish direct contact with it. Ananta Bhaṭṭa, Mīmāṁsā scholar, patronised by King Saṅgrāmasiṁha of Banaras, produced (c. 1715) the *Sadācārarahasya.* Nāgoji Bhaṭṭa, already noticed, produced in the field of religious and civil law a number of digests in the branches of daily conduct, pollution, agnate relationship, pilgrimage, expiation and śrādhha.

Nāgoji's pupil was Vaidyanātha, a commentator on his teacher's works, particularly in grammar. His wife Lakṣmidevī figures as the author of the commentary on the *Mitākṣarā,* styled *Bālambhaṭṭī.* The work is not held in high authority, but is noteworthy for its pro-women interpretation and was really written in his mother's name by Bālaśarman, the Pandit whom Colebrooke commissioned to prepare the digest *Dharmaśāstrasaṅgraha.*

In 1790-1, Kāśīnātha, a Mahārāṣtra again, compiled *Dharmasindhu.*[210] In 1773 Warren Hastings called together a number of Pandits and prepared the *Vivādārṇavasetu;* one of these Pandits Kṛpārāma compiled the *Navyadharmapradīpa.*[211] Warren Hastings collected also in 1796 a sheaf of testimonials of his own good conduct from Pandits of Banaras in Sanskrit, following which Wellesley collected signatures to a certificate from several Puri Pandits during the military administration of Cuttack, during the Second Mahratha War; in 1789, Trivedi Sarvoru Śarman got up the *Vivādasārārṇava* at the instance of Sir William Jones. The best of the British sponsored digests is Jagannātha Tarkapañcānana's *Vivādabhaṅgārṇava,* two parts of which formed the basis of the so-called Colebrooke's Digest. For Colebrooke Pandit Tārāmaṇi compiled also a voluminous dictionary, the *Śabdamuktāmahārṇava.* The interest in Dharma evinced at the Tanjore court in this time has been referred to elsewhere.

210. P. V. Kane, *History of Dharma Śāstra,* I, p. 463.
211. ASB. D. III, 2223.

Sanskrit and Muslims, British and Indian Nationalism

During the Muhammadan period, an Indo-Islamic Sanskrit literature grew into a moderately reputable size, counting both authors and themes drawn from the Muhammadan field. The vogue that Persian came to have in administration continued; even in the British period, Persian terms were retained, in revenue and judicial departments particularly. Interesting from this point of view was the Perso-Sanskrit lexicographical compilation *Rājavyavahārakośa* done by Ḍhuṇḍhi Vyāsa, a Mahārāṣṭra who sojourned at Tanjore, Banaras, etc., for Raghunātha, just on the eve of our period; this was followed by the *Yavana-paripāṭī-anukrama*[212] of Dalapatirāya (1764), which gives a number of Persian words of public and administrative importance, compiled under a Mahādeva siṁha of some West Indian State.

That Sanskrit was not in slumber or unmindful of the political changes coming over the country is reflected by the way it reacted on the advent of the British or subsequntly on the rise of the national struggle and the dawn of the Gandhian era. In the days when the foreign factors like the British and the French were struggling against each other and the local powers for gaining hegemony, Sanskrit did not fail to take note of the politics, and in the *Ānandaraṅgavijaya Campū*[213] of Śrīnivāsa Kavi written in 1752, we have an account of the Deccan and Carnatic affairs of that time and the Anglo-French conflicts. On the one side, for the consolidation of administration British civilians and scholars began the study of Sanskrit and worked on law and lexicography; on the other, this led to the discovery of Sanskrit by the West and the foundation of the modern sciences of Comparative Philology and Mythology, and led to a new cultural revival imbued with a critical and historical sprit in India.[214] While Sanskrit came to be studied intensely for research, gifted scholars of traditional outlook began composing, just as they would have done in the case of any other new king, eulogistic poems on the British. *Aṅgrejacandrikā* (1801), *Itihāsatamomaṇi* (1813), the *Rājāṅgalamahodaya*[215] of the

212. *IHQ.*, XIV, 153-7.

213. Ed. by me with historical Introduction, etc., Madras, 1948.

214. For a detailed account of these, see my 'Modern Sanskrit Writings', in the *Adyar Library Bulletin,* XX, pts. 1-2 and as a separate booklet, 1956.

215. Ptd. Kumbakonam, 1894.

South Indan non-brahman Rāmasvāmi Rāju which drew praise from Mahāmahopādhyāyas, the *Aṅgalasāmrājyam* of Rājarāja Varmā of Travancore and *Aṅgalādhirājyasvāgata* of Paravastu Raṅgācārya are examples drawn from different provinces. Of poems on Queen Victoria may be mentioned *Vijayinīkāvya* by Vidyālaṅkāra Bhaṭṭācārya and an eulogy by Mm. Dr. T. Ganapati Sastri.[216]

More noteworthy and valuable from the point of view of the growth of literature is the rise of new movements and modes of composition in Sanskrit. Many Sanskrit journals came to be started; prose writing came into great vogue; minor poems, short stories, translations of poems and plays from English, all these appeared in sufficient volume to warrant the assumption of a modern period of Sanskrit literature. For an account of Sanskrit literature during this modern peiod when Western education had been established in the country, and new and social and political movements had begun to stir the lives of the people, I would invite the attention to two other papers of mine, *Modern Sanskrit Writings*, referred to above, and *Modern Trends in Sanskrit Literature* contributed to a Symposium to be brought out by the Sahitya Akademi, Delhi.

216. For a list of Sanskrit compositions on Queen Victoria, cf. my *Modern Sanskrit Writings*, Appendix.

XIX

FROM CAUSE TO GROUND—A DEVELOPMENT IN CONCEPTS.

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This paper is an attempt to set forth the central difficulties in the application of the concept of causality at the scientific and philosophical levels of knowledge and to show the evolution of the logically more satisfactory concept of ground. There is nothing arbitrary about concepts and the human mind has always been resourceful enough to forge new and better concepts where original ones have failed to render phenomena intelligible.

An examination of what we imply by the term 'cause' might reveal to us its inherent difficulties. If we look into the connotation of this term it is at once evident that the concept in question is an attempt to understand change. "It attempts to explain what is fleeting and limited in time, what was not, but is and may cease to be, what in other words is occasional and impermanent."[1] When, for instance, there is an earth-quake, an eclipse, or a cyclone, we ask: what are the causes? Similarly we enquire into causes of famine, war, and so on. All this implies that a previous state of things has undergone a change. If there were no change in the existing order of things, the question of causation would never arise. But changes are constantly occurring and we search for their causes.

We cannot think of the occurrence of changes except in the order of time. It is our mode of perceiving the changes that are taking place all around us. Time has no significance except as standing for movement, growth, change. The concept of causality, therefore, necessarily implies the notion of time. The phenomenon explained as well as what is supposed to be the cause of it

1. S. S. Suryanarayana Sastri, 'Advaita, Causality, and Human Freedom' (*Indian Historical Quarterly,* Vol. XVI, 1940), p. 118.

are events in time. Phenomena which are independent of the temporal process like, for instance, mathematical relations fall outside the scope of the category of causality.

The idea of time involves the distinctions of past, present and future. It is a characteristic mark of causation that what we term the 'cause' is always temporally prior to the effect. We can never conceive of the cause as after the effect in the time series. Nor is the cause simultaneous with the effect, for the term cause not merely implies the effect; it also implies the relative futurity of the effect and the effect implies the relative priority of the cause. Though the relation between cause and effect is continuous, our thought throws a line across the process; on the one side we have the cause, on the other, the effect.

Now the idea of cause as antecedent to effect, operating from behind as it were, imposes a limitation on our mode of explanation. Explanation of phenomena in terms of cause and effect restricts itself to an answer to the question, 'how?'. The antecedent reveals to us how a change has occurred, the actual process by which it has come about, what it is due to. But the question, in Kenneth Walker's words, "which most nearly concerns us human beings and which from the earliest years has loomed so large in our minds"[2] is the question, 'why?'. "As children we were continually asking, 'what does this mean? and 'why is it like that?' and many of us continue to ask the same questions to the end of our days".[3] The question 'why ?' is essentially a question relating to purposes and ideals which exist in the future and not in the past. The causal category has, therefore, simply nothing to do with it. Purpose or meaning is an entirely different concept. Scientists of the last century fought shy of this concept and attempted to explain every movement purely in terms of antecedent causes. But we have to remember that interpretation in terms of antecedents supplies merely a part of the real explanation and the less important part at that, the 'how?'. The more significant aspect of the explanation is that which deals with the question, 'why?'. Says Dr. Brahma, "The conditions under which the thing happens are only external; they supply merely the *occasion,* not the real *ground,* for its happening. It is the idea that alone is creative and can explain the

2. 'Meaning and Purpose', p. 97.
3. *Ibid.,* p. 97.

emergence of anything new. Minus the idea, the external conditions prove hopelessly inadequate for the explanation of the effect that is supposed to come out of them."[4] Such an explanation namely as to the 'why?' of a thing must necessarily employ the concept of purpose. Every change may be due to some cause, but it is for the sake of some purpose. The indiscriminate use of the terms 'how?' and 'why?' to mean the same thing arises from a confusion of two different standpoints. Some thinkers, notably Aristotle, have represented the purpose as a special type of cause, the 'final cause' but the expression is only figurative and if taken literally a *final cause* is a contradiction in terms.

The need for the concept of purpose and the difficulty of applying the causal category increases as we deal with higher orders of being, plants, animals and men. "The higher the form of life, the more apparent is its capacity to 'deal with' its environment, in other words, the more obvious is its intelligence".[5] Even the inanimate world does not seem to be without a purpose. All that we learn of the order of the physical world leads us to think that it is part of a great purpose. It may be that matter serves a purpose not of its own but outside of itself but it is hard to be convinced that it is devoid of any meaning whatsoever. "Indeed", says Kenneth Walker, "if adaptability is taken as a measure of intelligence, it would seem that some degree of intelligence must be admitted to inanimate objects, for a steel spring as well as a beast of burden has the capacity to adjust itself to the weight which it is called upon to support."[6]

One of the crucial problems involved in the notion of causality is whether the relation between cause and effect is determinate or indeterminate. A good deal of argument has gone on in regard to this question both among philosophers and scientists. Without going into the merits of the arguments for and against determinism, we can show that either line of argument if logically analysed will prove fatal to the concept of causality. The question whether or not the cause controls and determines the effect boils down to whether the effect is implicit or non-implicit in the cause. Is the relation between cause and effect internal or external? Is it orga-

4. 'Causality and Science', p. 65.
5. Kenneth Walker, 'Meaning and Purpose', p. 105.
6. *Ibid.*, p. 105.

nic or mechanical? Does the effect exist in the cause before its production or is it produced *de novo*? Determinism will hold good only if the former of these views is true. The nature of the effect would be determined by the cause only if there is a binding inner connection between the two. Their relation must be continuous. The transition from cause to effect must be a development of latent possibilities. On the contrary, indeterminism would prevail if cause and effect are merely juxtaposed as in the second view. There being no necessary connection between causes and effects we cannot predict what effect will follow the operation of a particular cause.

The two views regarding causal relation stated above are sponsored by the Sāṅkhya and Nyāya-Vaiśeṣika schools of Indian Philosophy respectively and we may take them as illustrations to show the ultimate untenability of the causal category whether its relation is regarded as internal or external. The Sāṅkhya philosopher maintains that the effect exists in the cause in a subtle or unmanifest condition before it is actually produced. He says that if this is not admitted, and if, on the contrary, it is maintained as the Naiyāyika does that the effect comes into being afresh, there will be nothing to bind and restrict particular effects to particular causes. "One may gather figs from thistles or press sand to get oil."[7] But if anything may produce anything it is a negation altogether of the notion of causality. The terms 'cause' and 'effect' would have no meaning if they did not imply a certain event being essential to produce a certain event.

The Naiyāyika, however, has equally strong reasons to refute the Sāṅkhya view. He holds that the effect is not pre-existent in the cause. It is entirely different from the cause and begins to exist only when it is produced. He says that if the effect is already existent, there would be no need for its production, and hence no need for any causal operation. "It is meaningless to say that what is existent is produced or born."[8]

The significant point of the controversy for us is that in cancelling each other the arguments undermine the very notion of causality. This is pointed out by the Mādhyamika Nihilists as well

7. T. M. P. Mahadevan, 'Gauḍapāda', p. 133.
8. *Ibid.*, p. 135.

as by Gauḍapāda. If the effect is pre-existent in the cause, there is no need for its production and if it is not pre-existent, it can never be produced. Both Satkāryavāda and Asatkāryavāda are untrue. "And the disputants who are ostensibly advocates of dualism (dvayāḥ) make known, in truth and without their own knowing, *ajāti*."[9]

We may point to one more difficulty. It is a mark of causation that cause and effect are relative terms. The same phenomenon may be considered a cause in relation to its effect, and an effect in relation to its cause. But since this is so, in trying to explain each event in a series by its antecedent we are taken on to an infinite regress. Such a line of reasoning leads nowhere. If in order to get over the regress, we draw the line somewhere and say that any particular event in the series is itself uncaused while causing the subsequent one, the same logic must consistently be applied to every subsequent event. The result would be that nothing is the effect of anything and the notion of causality breaks down. So the causal category can be retained only at the risk of an unavailing infinite regress.

What is the regress due to ? The fact is that causality is an attempt to explain one particular event in terms of another particular event. But the particular or contingent can never really explain the particular. The particularity of the particular is constituted by certain distinctive characteristics which belong to it. In causal explanation what we do is to take for granted that the special characteristics which belong to the particular effect exist in the other particular which we regard as the cause. In so doing we merely transfer the concerned particularity from one instance to a previous one and not really explain it. Hence as Dr. Brahma remarks, "If we always seek a particular as the cause of another particular, we are far from reaching any real explanation of the particular and are led on to an infinite regress."[10] Nor is there any justification in so assuming the particular characteristics of the effect to be present in the causal particular. To borrow an illustration from Dr. Brahma, a set of ear-rings out of which a necklace is made do not explain the particular form or shape of the necklace. The very shape of the ear-ring is opposed to that of the necklace.

9. T. M. P. Mahadevan, 'Gauḍapāda', p. 135.

10. 'Causality and Science, p. 66.

Hence "a particular, far from helping the emergence of another particular out of it, rather obstructs or opposes it."[11]

What, then, is the remedy? The causal explanation has been found to be a flimsy and slippery affair on every consideration. The true method of explanation of a particular fact consists in finding not another particular but the universal which contains an adequate and real ground of particulars. The ear-ring out of which the necklace is made does not explain the form of the necklace. On the other hand both find their explanation in the common substance gold which forms the ground of both. The nature of a thing becomes intelligible only by reference to the system or whole to which it belongs, the general plan or scheme of which it is an instance. Considered apart from the system, the particular fact loses its significance. Everything is what it is on account of the system which underlies it and the totality of the relationships in which it stands to other things within the system. And the deeper the system that we can think of and the more complex the relationships, the greater is the significance of the thing. Take a man in relation to his family—he is a father, a son, a husband, a brother and so forth. Think of him in relation to society—he is now a member of a political body, an economic organisation, a religion, a certain culture and a way of life and so on. Now think of him against the still larger background of the biological world—he has now not merely all the qualities that flow from his rationality but all those from his animality. The aim of thought is to find the ultimate ground of everything.

Every phenomenon logically presupposes its ground or system and is a consequent which is necessarily implied in and follows from the idea of the ground. As Bosanquet says, "the ground implies a consequent other than, though fundamentally one with, itself."[12] It must be noted that the relation between ground and consequent is not temporal, as between cause and effect, but logical. The ground is that without which the consequent would not be what it is. The ground is logically and not temporally prior to the consequent. Temporal priority may sometimes be an indication of logical priority but it is never identical with it. To quote Bosanquet again: "Every whole in as far as its parts form

11. *Ibid.*, p. 66.
12. 'Logic', Vol. I, p. 253.

a system has a nature which is independent of time, or (what comes to the same thing) continues positively and actively through the fugitive moments of time."[13] "Mere temporal relation is nothing. It is only the unity behind the temporal relation that can bind cause to effect; and in the real or complete Ground this unity is made explicit."[14]

It has been shown in an earlier part of this article that the concept of cause deals with the 'how?' and the concept of purpose with the 'why?' of a thing. When we begin to think in terms of the ground we leave behind the popular ideas of 'how?' and 'why?'. The standpoints of causality and purposiveness as such are both transcended and their deeper implications merge in the unity of the ground.

It is significant to note that the tendency in modern science is to explain phenomena in terms of grounds and consequents. Modern science has ceased to look for fixed causes. It has long realized the significance of the teleological approach and now has begun to gather up both causality and purpose in a higher synthesis at the level of system. It no longer regards things and events as isolated particulars but looks upon them as members of an integrated whole. We shall however refer to this novel change from the point of view of the causal category which has been the theme of this article. Professor Benjamin remarks: "Many believe that whatever may be said as to the existence of causal connections at the empirical level, nothing of the kind is required for science.[15] Scientific laws according to him state "repeated associations of events". "In modern physics", says Collingwood, "the notion of cause has disappeared. Nothing happens owing to causes; everything happens according to laws."[16] Professor Wooton Says, "The order that we can perceive in the universe is not so much a matter of links and chains as simply an observed regularity of patterns."[17]

Before we leave the topic of ground it would be necessary to note the distinction between the logical and the metaphysical

13. *Ibid.*, p. 262.
14. *Ibid.*, p. 264.
15. 'An Introduction to the Philosophy of Science', p. 369.
16. 'An Essay on Metaphysics', p. 50.
17. 'Testament for Social Science', p. 18.

grounds. The ground for science and logic is one that stands on the same ontological footing as the consequent. Both belong to the same order of reality, viz. the empirical, and the relation between them is actual. The ground designated as metaphysical is on a higher ontological plane than the consequent. The ground is real with respect to the consequent and the consequent illusory with respect to the ground. The relation between the two is not actual but only apparent. It is *Viṣama Sattāka* and not *Sama Sattāka.* The real rope is the *adhiṣṭāna* of the illusory serpent and likewise Brahman of the world-appearance. The logical ground-consequent is a relation of identity in difference; the metaphysical, one of identity with the appearance of difference. The doctrine of the metaphysical ground is exemplified in Kant's theory of noumenon and phenomenon and Bradley's 'appearance and reality', but nowhere is the doctrine so well developed as in the *Vivartavāda* of Advaita Vedānta. To characterise *Vivarta* as a type of *causation* seems to be misleading.

To conclude, causality has been shown to be an essentially popular notion having no logical basis. But, for that matter, its immense practical value should not be underestimated. It has played a significant part in the development of the physical sciences such as engineering and medicine. The fact that they employ this concept is no sign of their backwardness because a thing that is logically untenable may yet work in practice.

An account of causation would not be complete without a reference to the Advaitic view on the same. The Advaitin does not deny causality altogether. He denies its intelligibility and ultimate reality, but accords it the lower empirical status which is its due. From the standpoint of the highest reality both cause and effect are no doubt appearances. The notion of causality is a product of nescience. But so long as we live in the world of nescience, without rising above it to that which is neither cause nor effect, we have no right to deny causality. It is as objective as the world we perceive. In fact we largely depend on this concept in the conduct of our daily lives.

XX

NEW CHINA

Dr C. P. RAMASWAMI AIYAR,
Madras

[About the second week of September, 1955 an invitation was extended to ten Universities in India by the Peking University. Each of the ten Universities (Banaras, Aligarh, Viswa Bharati, Delhi, Bombay, Calcutta, Madras, Allahabad, Oosmania and Travancore) was represented by One Professor and two Students. Dr. C. P. Ramaswami Aiyar led the delegation. His impressions on New China are published here with the assent of the Government of India. *Ed.*]

In the numerous postprandial and other speeches that I had to deliver as Leader of the Delegation, I endeavoured scrupulously to refrain from making any reference to competing ideologies and confined myself to discussions of educational, agricultural and industrial topics; and even on economic discussions I avoided doctrinal criticisms and paid a tribute, on more than one occasion, to the apparent and wide-spread enthusiasm of the people for the present regime in China, to their marvellous discipline and to the amazing pace of reconstruction. I am glad to say that on all occasions on which my Professor colleagues had to speak, they took the same line. Although all of us asked questions relating to the economic and industrial structure of China and some of the students delegates specially adverted to the difference between the monolithic constitution of the Students' Unions in that country as contrasted with their position in India, yet it was a matter of great satisfaction that they eschewed all captious or cavilling criticisms.

Amongst the representatives of the Universities, there was one lady Professor (from Aligarh) and five girl students in addition to my grand-daughter who is a graduate of the Madras University and who accompanied me as my Personal Secretary. Among the students, there was one representative from Viswa-Bharati (Ambulu) who had taken a Diploma in Chinese and who was able

to make herself understood in Chinese both in private conversation and in public gatherings. She greatly contributed to make our Delegation popular and I may record here that, in future there should be included, in Delegations like ours, at least one or two persons who can speak the language of the country which they are visiting. Such a step would make a lot of difference to the cordiality and intimacy as well as the sense of reality of mutual contacts. It will in particular render less likely that the Delegation will be at the mercy of the interpreters. One of the men students from Viswa Bharati and practically all the girl students were accomplished singers and K. K. Sarkar from Viswa Bharati was a trained reciter of Tagore's poems and a competent vocalist. Miss Zeba Ansari from Oosmania University and Miss Suhasini Deshpande from the Bombay University especially distinguished themselves by their musical and social gifts and along with Mr. Chandrasekharan of the Banaras Hindu University, (an expert exponent of the classical Indian dance) made a great impression on large Chinese audiences in Peking, Shanghai, Mukden, Canton and Hang Chow. Wherever we went, they received an ovation as they not only learnt a number of Chinese songs but were able to teach some Indian songs to Chinese students. I may assert that the success of the Delegation was, in no small measure, due to the musical and artistic proficiency of the student members of the Delegation.

Before the Delegation left Delhi, an interview was arranged between the Chinese Ambassador and myself and I asked the Ambassador if he had any objection to our visiting, in addition to Universities and educational institutions, agricultural farms (both collective and individual) and centres of industry and hydro-electric and irrigation enterprises. I was informed that arrangements had already been made on the lines indicated by me and I was further permitted to take with me as Technical Adviser, Dr. Gopal Tripathi, Principal of the College of Technology in the Banaras Hindu University, who, in all the places that we visited, made it a point to see industrial establishments and institutions imparting technological education.

Prior to the departure of the Delegation from Delhi, it was addressed by Sri Humayun Kabir and Sardar K. M. Panikkar who had been Ambassador in China and who spoke on some general aspects of Chinese life. Both in Delhi and later on, I addressed the delegates outlining the importance of being very tactful and trying

to conform, as far as possible, to Chinese ways of life and not to give the appearance of aloofness. I also stressed the importance of the Delegation acting as a team and consulting the Leader of the Delegation before they took any decisions. I may say that, in this matter, the members displayed remarkable unanimity and mutual trustfulness.

Both on our way to the Chinese Republic and on our return, we halted in Hong Kong and one could not but observe the evident prevalence of smuggling and the accompaniments of international "gay life." We could not also fail to observe the large number of beggars in Hong Kong compared with their practical absence throughout China. During our travel from the extreme south to the north of China, the Delegation saw very few beggars on the streets or in the various places of public resort and entertainment which we attended. The Communist party apparently makes it a special point to deal effectively with the beggar problem.

Another feature which differentiated Hong Kong from every other place in the People's Republic was in the matter of giving tips. In hotels and restaurants, in railway stations and everywhere else, servants and waiters in Hong Kong expect and even demand tips or presents; but in China proper, no tips or presents were accepted even when offered. It is also a matter worthy of remark that no articles were lost. Even when carelessly overlooked, such articles were retrieved and sent back to the Delegation. A member of our Delegation more than once lost her purse, passport or other small or large articles; but invariably they were found and sometimes sent from our place of sojourn to the next destination.

At the Chinese border we were met by Dr. Yen and Miss Lao, the Dean and Interpreter of the Peking University. Miss Lao and the other Interpreters who, at various stages, joined our party, spoke English extremely well and one of the Chinese Interpreters had learnt Hindi at the Peking University where there are some Indian teachers of Hindi. He spoke Hindi fluently and with a very good accent. The extreme efficiency of the Interpreters was a matter of great advantage to us because throughout our tour with about half a dozen exceptions, none of the persons we met talked any languages excepting Chinese even though some of them had

received their education in American or English Universities. As a matter of fact, my speeches, those of the other members of our Delegation and the speeches of our Chinese Hosts were translated sentence by sentence from English to Chinese and Chinese to English.

We reached Canton on the 27th September and there was a dinner given to us by the Chancellor of the University. There, as elsewhere, we were introduced to the staff and students and there were Indian and Chinese songs after dinner. Even at the outset, in the course of the welcome speech, the Chancellor referred to the existence of other Universities in the vicinity and pointed out that from 1952, the policy was being followed of preventing all overlapping of studies, each University concentrating on a few subjects. For instance, the Canton University itself had been what is called a comprehensive University possessing many Faculties but some of the Faculties had been abolished and transferred elsewhere. Engineering and Technological Universities are either near Canton or Peking, Shanghai or Mukden and students who wish to get instruction in those subjects have to choose these Universities. Even during the first meeting in Canton, questions were invited by the Chancellor and in answer to queries by myself and some of my delegates, it was explained that the problem of educated unemployment did not really arise in New China, because the demand for educated persons in most phases of national activity exceeded the supply and also because the Government made a list of the requirements of the State from year to year and after making allowances for wastage, adopted the policy of admitting only so many students to the University as could be fitted into appropriate places in the national economy. For instance, if one thousand engineers were needed, they would not admit more than 1200 students into the Engineering Colleges. Such of the students as were found to be unfit during the course of their studies, were sent to other avocations, but everyone who went through the course successfully was sure to get a place. This observation was made not only with reference to specialised professions like those of Engineers, Doctors, Teachers and so forth but even to students of the Humanities. It was explained to us that at present there were many more places to be filled than there were men competent to fill them because re-construction was taking place in China in all departments of educational, industrial, agricultural and manufacturing activity.

In Canton we saw a very large swimming pool with modern facilities (dressing rooms, etc.) which is very popular. The hall named after Sun Yat Sen is a model of accoustical efficiency and can seat over 5000 persons.

We were informed at Canton that we were expected to be present at the National Day Celebrations at Peking due to take place on the 1st October and an army plane was placed at our disposal to take us to Peking from Canton. At Peking, we were received not only by the Indian Ambassador and the officials of the Indian Embassy but by Professors and students of the several Universities situated in and near Peking and on this, as on every other occasion, we found that the students were extremely friendly and well disciplined. Although crowds of (500 to 1000, and in some places 2000) students received us at various institutions, railway stations and airports, absolute silence prevailed until the Chancellor of the University concerned or one of the Professors led the applause. Immediately there was tumultuous welcome and cheering and the handing of bouquets. All sounds subsided at a word or sign from the authorities.

On the 29th September there was a great banquet given by Premier Chou-En-Lai at a new hotel which had been constructed in record time for the purpose of catering to visitors and foreign tourists. There were over a thousand persons at the banquet and the arrangements were on a most sumptuous scale. The number of courses and the variety of drinks were astounding. Although in private life, most of the Chinese are extremely abstentious, in their public entertainments and their treatment of guests, they are significantly lavish. As an example, I may mention that wherever we went, the members of the Delegation were given very comfortable rooms at the leading hotels and the leader was always given an additional room to receive visitors and to have small meetings; but the Secretary to the Chancellor Dr. Hsu Teh-min (apparently an influential Communist leader who accompanied us throughout the tour) and the interpreters lived in one or two small rooms in which four or even more persons squeezed themselves. This difference between private abstemiousness and lavish hospitality, towards foreigners and guests, was a marked feature throughout our tour.

In Peking, we noticed (what we observed during the whole tour) the tremendous pace of construction activities. There is a

great department store in which three storeys were already completed and which is as large as any of the big American Department Stores. This was built in eight months by thousands of persons working day and night. Two more storeys are under construction and are expected to be completed in six more months. The rooms in the three storeys are filled with consumer and luxury goods of all types for sale.

On the 1st of October, the Delegation attended the National Day Parade at which Mao Tse Tung, the Chairman of the Communist party, Chou En-Lai, the Defence Minister and other Ministers participated. This celebration was symptomatic of what is observable throughout China. There was a crowd of nearly half a million people who occupied a very large area just beyond the Parade ground. They observed almost absolute silence. They were not controlled by the police but it was clear that there were a few persons wearing some badges (evidently leading figures of the Communist party) dotted among the spectators and they were able to enforce strict discipline. The fact that about half a million people observed complete silence without jostling or pushing and without inconveniencing the children and women who were amongst the crowd was itself an object lesson. The parade was a great military, naval and aerial demonstration and although doves emblematic of peace were released from aeroplanes, neither on the National Day nor anywhere else was there any question of preaching non-violence. The speakers discoursed on the necessary and inevitable restoration of Formosa or Taiwan, on the inevitable destruction of Imperialism or Colonialism, on peaceful co-existence among the nations and on the disinterested help given by the Soviet Republic towards the rehabilitation of China. These points were reiterated on all possible occasions during our visit, whether it was a farm or factory or a school or a University. A Chancellor, the head of a factory, the heads of cooperative organisations, farms and factories uniformly spoke of the corruption and nepotism of the Chiang Kai-Sheik regime, of the large amount of money carried away by him and his relations and dependents, of his oppressive taxation and misappropriations by himself and the members of his family, the help given to him by the U. S. A. and other so-called Imperialistic powers, the necessity to resist the re-imposition of the Chiang Kai-Sheik regime, the need to be perpetually on guard against hostile designs, and the unselfish and continuous effort of the Soviet Republic to give material, technical and other assistance.

Every such speech concluded with the statement that all that has been done was done between 1949 and 1955, that there may be, and undoubtedly there are many shortcomings in the present regime and that China would always be willing to receive friendly advice and assistance from countries like India. Every speech also pointed out that there is a two thousand mile frontier between India and China which was never violated, that for more than 2500 years, there was no trouble between China and India and that all the wars and disturbances that had taken place were due to the machinations of the Imperialistic powers. Almost the same formula and the same language, the same exhortation and the same sentiments were repeated wherever we went, from Canton to Manchuria and back to Canton. Similar exhortations and statements were repeated morning, noon and evening in broadcasts accompanied and preceded by music, in schools, in factories and farms, in Universities and in public places. The results of this continuous and skilful propaganda were obvious even to casual visitors. Whether we entered a house in a slum area or model village or a factory or a University, the spokesmen referred to the misdeeds of the Chiang Kai-Sheik regime, the inimical attitude and actions of America and the spontaneous and disinterested help of the Soviet Republic. Throughout the country, therefore, an atmosphere of intense hostility towards America is fostered and prevalent. There is hostility against British and other non-Communist European nations but not so pronounced as against the U. S. A.

With regard to Macao, the Chinese opinion is unanimous. Like Hong Kong, Macao is regarded as a centre of contraband trade and smuggling and it is also unfortunately true that there is considerable gambling and prostitution in both these places; and these are referred to as vices encouraged by Western nations for their own advantage. Even after a short visit of five weeks, it is possible to make the statement that there seems to be no likelihood of the Chinese being reconciled to the Chiang Kai-Sheik regime and there is every likelihood of the continuance, and perhaps increase, of bitter feelings against the U. S. A. amounting to passionate hostility in many localities (like Shanghai, a former American stronghold).

After the military parade was over, there were processions of University and High School students, pupils of Children's schools,

artists, dancers, Trade Union representatives and representatives of various industries, all of them characterised by the same discipline and orderliness which I have referred to.

During the celebrations, portraits and statues on a heroic scale of Marx, Engels, Lenin, Stalin and other Soviet leaders and of leaders of East German, Polish, Czechoslovakian, Albanian and Hungarian Governments were taken in procession. Some members of our Delegation put the question rather tactlessly to our guides as to why there were no statues or portraits of Mahatma Gandhi or other Indian leaders. The answer came swiftly that that was a celebration organised by the Communist party and Communist leaders were therefore exclusively honoured.

I was asked to give a short talk over Radio Peking and I emphasised the orderliness and discipline prevalent during the National Day celebrations. 46 Delegations (political and cultural) of various countries were present during the celebrations and after dinner, there was an open air dancing by various national and international groups on a very elaborate scale. In company with Rajkumari Amrit Kaur (who was on a visit to China), I was able to meet the Chairman of the Communist party Mao Tse Tung, Premier Chou En-lai and other Ministers.

Our Delegations stayed for a number of days in Peking. We were present at an international concert at which Japanese, Polish, Burmese and Chinese singers and dancers participated. We also visited a Buddhist temple and a mosque. The Muslim members of the Delegation were anxious to attend prayer at the mosque and arrangements were made for this purpose. At the mosque, as in other places, the person in charge referred to Chiang Kai-Sheik's bad treatment of the Muslims, the freedom of religious belief enforced by the People's Republic and the great encouragement given to Muslim education. He practically repeated the same formula as we encountered in the other places that we visited. But some members of the Delegation who went thereafter, on a Friday, to the mosque evidently found nobody attending the mosque. At the great Buddhist temple in Peking, as in other Buddhist shrines, we found that great care had been taken to preserve the artistic background. The images were maintained in good condition and the paintings on the ceilings and the frescoes bore traces of expert repair but the accompaniments of religious observance were gene-

rally not present. Generally speaking, we found very little traces of religious ritual or ceremony or of religious congregations.

On the 4th October, the Peking University arranged a well-attended Reception to our Delegation and an account of the University policy of China was given by the Chancellor on the lines already indicated. In Peking, as in other places that we visited, the local authorities and the educational organisations gave us Receptions and dinners which were generally on a sumptuous scale and there were entertainments at which very often our students and the Chinese students participated.

During the stay at Peking, I attended the People's Court and later, had a discussion on the legal system of China with the Minister for Legal Affairs who met the Delegation as a whole. In the People's Court the proceedings are conducted without the aid of lawyers (as is the case in practically all judicial proceedings.) The attempt is to mediate between the parties and settle the disputes by friendly adjustments and reproof where it is considered necessary.

A visit to a prison was arranged. Prisoners are trained in cottage and factory industries.

In Peking the Ministers of various dapartments met us and there were discussions on the Agricultural policy of China and with regard to Higher, Secondary and Primary education. There were meetings with the authorities of the People's University, visits to the Technological University and Textile Mills and later, we had a discussion with the Minister of Industry on commercial enterprises and on the five-year plan of New China. We also visited the Institute of National Minorities where representatives of the various minor nationalities in China received education in their own language and in furtherance of their own specific cultures, subject, nevertheless, to the insistence on Chinese and on Marxian as compulsory subjects. In every educational, cooperative, industrial and other organisations, the whole training is directed towards the maintenance and encouragement of the Communist ideology and reliance primarily on Chinese effort to stimulate every type of progress subject to the one exception of reliance on the Soviet Republic.

Two aspects of the national programme may here be noted. Throughout our tour, we could not have seen more than 1000 private motor cars in all and it was explained to us that the Chinese do not encourage or even permit the purchase of private cars. There are buses in all the chief cities which are fairly well run; but it was emphasised that until China produces its own cars, no encouragement will be given for the purchase and maintenance of private cars. The purchase of foreign cars is sternly discouraged. Nevertheless, we observed that the cars used by the Government and given to guests were luxurious American and German models. Although we did not push our enquiries further, it was clear that many of these cars must have been smuggled from Hong Kong.

It was also evident that luxury travelling by railway is very strongly discouraged. Generally, special trains were arranged for us and we found only a few people on the platforms; but on the occasions when we travelled by the ordinary train, we never saw on the platforms of even big cities like Shanghai (whose population is over seven millions), more than a few dozen passengers. We were told that in the interests of national economy, railway travelling was not encouraged except for essential reasons.

The Government controls and regulates the production and distribution, through State-controlled Cooperatives and other agencies, of food and clothing materials and housing. So far as we were able to observe, the system works fairly well in big cities though there are signs of great poverty in the country localities. Blue cloth is manufactured by and for Government on an extensive scale and the bulk of the men, women and children wear the same kind of garments, namely, buttoned-up coat, pants and cloth shoes with rubber or crepe soles manufactured in China. Women, generally speaking, wear few or no ornaments and cut their hair. There is thus great uniformity of dress observable throughout China and even among the professorial, diplomatic and government circles, the dress is of a uniform pattern though, in these ranks, the material is black instead of blue.

It became obvious during the discussion of the five year plan with the Minister of Economics, that a wide-spread attempt is made to level up the wages of the workers and level down the higher salaries, the lower and upper wages level ranging from 40 Yuan minimum to 600 to 700 Yuan maximum.

Currency and foreign exchange are very strictly controlled and we were told that the inflation which was startingly obvious in the Chiang Kai-Sheik regime is being brought under control. No doubt, this control co-exists with and is inseparable from the regulation of foreign trade, Soviet Russia and the Soviet countries being the main suppliers and very little trade being possible with countries outside the so called iron curtain on account of the practical blockade of Chinese coastal shipping.

The Delegation visited the Kuanting Reservoir where a hydro-electric installation is being set up. It was clear that in the matter of irrigation and hydro-electric enterprise, Chinese progress cannot be compared with India's. The building of the reservoir itself is on lines not comparable with recent Indian practice, although the work is proceeding very fast and latterly with up-to-date machinery supplied by the Soviet Republic.

We also visited a machine-building factory in Mukden, an open cut coal mine and an oil refinery in Fushien, an Iron and Steel factory in Anshan, an Agricultural College and Medical Institutions.

One fact that impressed itself upon us was that although Soviet technicians and experts are utilised, the number of Russians we saw was very small and they never made themselves obvious or prominent. Indeed, in the various colleges and Universities that we visited (over a dozen in number) we were never introduced to a single Russian Professor or teacher. We were also never introduced, excepting on one occasion, to a Russian Engineer or Technical Expert.

Another feature that we witnessed was that practically in every Institution, Educational or Technological, women occupy positions from the highest to the lowest, from the manual worker to Professor, Foreman or Manager. Speaking generally, women share freely in all national activities.

There is a great Agricultural College in Mukden where up-to-date instruction in all aspects of Agriculture is given and there are a few agricultural farms run on modern lines; but generally speaking, and especially in South China, agriculture is still conducted on primitive lines with the aid of manual labour and horses and

buffaloes, and in many localities, men and women are used for drawing the plough.

Concerted efforts are made to introduce cooperatives in big villages and some of these cooperative farms, especially near big cities, are working extremely well and producing fruits and vegetables in great quantities with the aid of chemical fertilisers as well as organic manure. China depends largely on human manure for agriculture and such manure is preserved and used with the utmost care. We also saw in several places fruits and vegetables grown by cooperative Societies in hot houses under glass.

In a few selected villages, near Peking and other large cities, the Soviet technique is being adopted of deep ploughing and close planting and the use of fertilisers and insecticides. It was proudly pointed out to us that in many of these villages whereas the annual income of peasants before liberation was 120 Yuan per year, labourers were now able to get up to 700 Yuan per year, the average peasant getting 400 to 500 Yuan.

I may here mention what is fairly well known, namely, the almost total elimination of the landlord element in agriculture. The people who acted as our guides were very reticent as to the fate of the old landlords and they made general observations that many of them had joined Chiang Kai-Sheik and some had left the country. But it is clear that many landlords must have been liquidated or have been driven out. The landlords are not entitled to and are not to be given any political rights until their feudal mentality is changed. A period of ten to fifteen years is regarded as necessary for this purpose. Until then, they cannot vote at elections or exercise any political rights. At our request, we were taken to what was once a landlord's village and we met the erstwhile landlord who explained to us how completely he had been converted to the Communist ideology, how he repented having been a landlord, how he once possessed a 20 roomed house and had several servants or attendants working for him, how today in his own house, he occupies two rooms and his erstwhile tenants occupy the other rooms, how he is cultivating the small plot of land that has been allotted to him with his own manual labour and how happy he is, having jettisoned all feudal ideas. He referred to the iniquities of the former regime and also referred to the efforts made by Americans to rouse discontent among the old landlord

group. We however did not see many landlords of this description. We witnessed a play (The Fisherman's Revenge) in which the sins of the old landlord class were exemplified, the landlord being responsible for reducing his tenants to poverty and for insisting on forced labour and reducing the wages and also for seducing village girls. The play itself depicted the revolt of the peasantry and the revenge taken by them on the landlord. The word 'revenge' occurred very frequently during our tour. "Revenge against the landlord, revenge against Chiang Kai-Sheik and, above all, revenge on everything American," were the constant remarks that we heard.

At Shanghai, it was intended that the Mayor should give us a Civic Reception. As a matter of fact, it was given by the Vice-Mayor and we found that the Mayor had had differences with the Government and his present whereabouts were not known.

Acting upon a suggestion made by me, we were shown some of the primitive slums in Shanghai as well as some model villages built by Government. We also saw elaborate model dwellings for workers in industrial establishments.

There are also a number of Institutions established in China called "Sanatoria for the Old" where retired workers are given comfortable cottages to live in on a small payment.

We visited in Shanghai the 'Children's Palace' which owes its origin to Madame Sun Yat Sen. There, as in most other centres in China, we found the greatest possible attention paid to the education of children. They are given facilities for sports and pastimes and taught to learn through play. The children, especially in the larger cities, are very often in Boarding schools as both their parents are often working in various factories and industrial establishments. Notwithstanding this deprivation of home life, the children are very cheerful and joyous and completely free from shyness or self-consciousness. The general impression derived by the Delegation was that in the matter of children's education a great deal is being done in the right direction which is worthy of imitation in our country. But even little children shout Anti-Chiang Kai-Sheik and Anti-American slogans and cry 10,000 years for Mao Tse Tung.

We also visited the Academy of Fine Arts and found that the typical landscape and portrait painting of the past is sought to be preserved. There was an attempt to copy Russian models but this tendency was not very prevalent nor was it very successful.

In most of our private conversations with and in the public utterances of Chinese leaders in various departments of life and activity, there were references to the need to relax international tension and to promote peaceful co-existence and friendly cooperation especially with India. Continuous attempts are being made to invite and entertain guests from other countries and in the National festival, we found Mr. and Mrs. Pritt, representing the British Peace Committee and there were groups from Belgium, Poland, Italy (including Pietro-Nenni and his family), Ceylon, Korea and Tunisia, representatives of the Japanese Diet, and, in addition to the Soviet Union, East Germany, Vietnam and many countries from South America, Albania and Yugoslavia were represented and there were some even from the United States who had attended the Warsaw Youth Conference. There were also present representatives of the British Quaker Association.

The gist of the statements and utterances made by Chinese leaders both during our conferences with the representatives of several Ministries and at various centres of national activity, was that when the Communists took charge, Agriculture, Industry and Transport were at a low ebb. There were prolonged civil wars before and during Chiang Kai-Sheik's time; and the Japanese war which followed thereafter was devastating. Currency was spiralling and corruption and nepotism were rife. The Communist party therefore concentrated firstly on the elimination of corruption and nepotism, secondly on land reforms which involved the wholesale elimination of the landlord and feudalistic elements and nextly on the promotion of heavy industries and geological and mineralogical enterprises. In all these directions generous assistance was received from Russia and Poland and Czechoslovakia. The Communist party gave first priority not to consumers' goods and luxury articles, but to heavy industries, this being the explanation for the scarcity of motor cars. The light industries that exist, for instance, in Shanghai, are largely those originally introduced by the foreigners and taken over. Agricultural labour is still largely manual and building construction is also conducted mainly without the aid of appliances like bull-dozers or even cranes as it is considered

necessary to utilise all the surplus man power that exists in the country. The stabilisation of currency has been brought about mainly through State monopoly of means of production and distribution. Strikes are sternly discouraged. In the result, we found that in the Anshan Steel Factory, the target for 1961 is 2½ million tons of pig iron and 3 million tons of steel. In the Fushuen Coal Mines, the production is 2½ million tons per year, the number of employers in that coal mine being 14,200. The minimum wage is 50 Yuan whereas an Engineer gets 300 Yuan. In the Oil Refinery 900 tons of crude oil is produced daily from shale. The minimum wage here is 46 Yuan and the maximum 100 for workers.

Generally speaking, excepting in the Anshan Steel factory where high class and up-to-date machinery from the Soviet Union was observable, industrial establishments are only gradually getting into their stride and cannot be compared with similar establishments now in existence in India. The Observatory in Nanking, however, is very modern and can compare favourably both in apparatus and equipment with the best Observatories of the world. It is also making signal contributions to astronomical discovery.

Turning to educational institutions, we found that, in general, the standard of Research was not very high and the apparatus was not of a superior type but was abundant in quantity. The Libraries contain mainly Chinese books and even in the ancient Peking Library, the number of foreign books, excepting in the Russian language, is small. In no library in China is Indian literature largely or adequately represented. The rumour that we had heard about the large number of Sanskrit and other manuscripts in the Chinese libraries was not substantiated. Lectures are invariably given in the Chinese language but Russian is compulsory in all stages of higher education, and both in the scientific and literary spheres, translations are being increasingly made from Russian. There are however a few German and English treatises in most of the Universities. But non-Chinese and non-Russian books are usually kept in the back studies. By and large, there is not an adequate supply of text books in Chinese, whether in the Humanities or in the Sciences or in Technological branches of study. In order to meet this situation, the Central Government practically prepares lectures on many subjects and distributes them throughout the educational institutions. These lectures are derived mainly from

Russian sources; and in the Humanities, they are largely based on the Marxian doctrine and ideology. These are used as basic material for lectures and instructions by the teachers. There is however, one very important and gratifying aspect of educational practice. Firstly, the teacher student proportion is very satisfactory. To give one example, in the Mukden Agricultural College, we saw three farms in which students work each of which was about 1000 acres in extent as well as a well-equipped dairy. In addition, we discovered that for 886 students who were pursuing a four-year course, there were 9 Professors, 10 Assistant Professors, 42 Lecturers and 100 Assistants and Demonstrators. Thus there were about 160 and odd teachers for less than 900 students. In the Library, out of 60,000 volumes, 4/5th were in Chinese. Of the balance 65 per cent was Russian. There are 24 Teaching and Research groups and 24 laboratories. This is a specially well organised College and almost similar is the organisation of institutions in Canton, Peking, Shanghai and Nanking.

Even more significant than this feature is the almost universal practice in the Universities of having discussion classes. The drawbacks incident to the kind of lectures already referred to are, at least to some extent, counter-balanced in these discussion classes in which lectures delivered by Professors form the subject of discussion between the students, some defending the thesis of the lecture and some attacking it, the whole process being under the unobtrusive supervision of a Professor or teacher.

Although Guides and Translators accompanied us throughout the tour, there was no restriction imposed on us as to our programmes and no prohibition of free movement. There was however a marked uniformity of welcome and methods of explanation and a monotonous repetition of statistical formulae contrasting the past sufferings with the present welfare and of warnings against the U. S. A. and praise of the U.S.S.R.

Wherever we went and especially in Peking, Canton, Nanking and Mukden, we found feverish reconstruction proceeding. Hundreds and thousands of people are continuously engaged in building new schools, hostels, University buildings, laboratories and tenements for workers in factories and agricultural dwellings. Speed is encouraged and rewarded. In every farm or factory, special prizes are given to what are called model workers and women workers are specially rewarded.

To sum up, it may be said that there is an intense planning activity throughout New China. That activity is specially observable in the educational sphere. No expense is regarded as too high for the expansion of schools and Universities, and the Professors of the University occupy an honoured place in the national polity. The organisation of heavy industry and the stimulation of agricultural production are given the foremost place in national endeavour and all luxuries are sought to be minimised, if not eliminated, although marked encouragement is given to ornamental arts and paintings.

This scrupulous attention to artistic revival may be specially observed in the case not only of old monuments like the well-preserved Ming monuments and museums but in recent structures like the Mausoleum in Nanking where our Delegation placed a wreath on the tomb of Sun Yat Sen with a Sanskrit inscription. We also visited the Jade Buddha temple in Shanghai and the Rock-cut temple in Hangchow, the Buddhist shrine originally erected many centuries ago with Indian assistance and containing many specimens of Indian sculpture.

National reconstruction is sought to be achieved by the maintenance of pervasive discipline and the system of enforced self-analysis and of lectures or what is described by the opponents of the regime as 'brain-washing'. For instance, if a person transgresses the traffic rules or keeps his house, garden or front porch in a dirty condition, he is asked to attend a certain number of lectures as they are called. At these lectures, leading members of the local Communist party and the neighbours gather around him and point out that his anti-social conduct is designed ultimately to handicap progress and to encourage the opponents of the Chinese regime like Chiang Kai-Sheik and the U.S.A. He or she is chidden and reproved and the process seems to be so thorough and effective as to produce immediate results that sometimes amount to nervous collapse. Wherever we went and whomsoever we met, we realised an overwhelming sense of personal responsibility and an adherence to discipline which are perhaps as much due to fear as to patriotism. Corruption is visited with summary and drastic punishment. One could not help feeling, however, that human individuality was put in the background and the importance of regimentation emphasised on every possible occasion. The Chinese think that at least as a transitional measure, such stern discipline is a *sine qua non* to progress. It is, however, permissible to doubt if a nation of 600 mil-

lion people would and could sustain such collectivised and regimental existence for long.

Dr. Suniti Kumar Chatterji of Calcutta, a member of the Delegation, is a philologist and has considerable acquaintance with Chinese literature and Chinese history and I have myself been interested for many years, in Chinese Art and Chinese Literature so that we were able to talk with our Chinese counterparts on the basis of some common background. It must however be remarked that although the Chinese listened politely to what some of the members of the Delegation said about old Chinese literature and Buddhist influences, yet they were much more concerned with modern developments than with discussion on Chinese or Buddhist classics and even our guides were very little acquainted with Buddhism or even the doctrines of Confucius or Laotse. Very often, I had the feeling that the Chinese are not now bothering themselves about the ancient faiths and cultures but are concerned with dynamic present day economic and social problems and the necessity to broadcast the benefits of the Marxist ideas which they seek to translate into practice.

This account of the tour cannot close without taking note of the universal desire, throughout our journey, of everyone concerned to promote cordiality between India and China. Huge crowds constantly welcomed us with cries of 'Hindi-Chini Bhai Bhai' and not only in the Institutions that we specially visited but in streets and places of public resort, the spontaneity and the friendliness of the welcome that we received were most striking. The Indian Film Delegation and the Lawyers' Delegation which were travelling in China along with our Delegation were also the recipients of a cordial welcome wherever they went. The Government of China spent large sums of money on and devoted much attention to hospitality; and even the average Chinese crowds either spontaneously or owing to previous propaganda were enthusiastic and almost tumultuous in their welcome. There is no gainsaying the Chinese desire to befriend India but there is also no gainsaying that they are most anxious that we should follow their plans, adopt the Marxist programme, cut ourselves loose from all contacts with the U.S.A., and other Western powers and form, along with China, Burma and other countries, a great block of Asiatic solidarity relying only on the support of the U.S.S.R. which is constantly described as the solitary country in the world which has demonstrated

complete unselfishness and a lofty desire to benefit other nations without any corresponding advantage to itself. I may add that in a private conversation with some of the leaders, there was expressed to me the idea that ultimately Asia must free itself from the influence of *all* non-Asiatic countries and act in concert. But this statement, soon after it was made, was modified and it was added that, of course, U.S.S.R. may be wholly relied on. In all conversations that took place, the impression was inescapable that persons were speaking almost to dictation. But I am convinced that the desire to befriend India is both widespread and genuine. As already indicated, our hosts evinced the utmost courtesy and hospitality. The Peking University and the Chinese Government not only arranged for a special plane from Canton to Peking and for special trains on a number of occasions but presented the Indian Universities with books and the members of the Delegation with souvenirs like landscape paintings etc. The members of the Delegation and the Indian Universities also reciprocated this gesture of goodwill by making similar presents of books and souvenirs to our hosts.

XXI

MUSIC AND SUBLIMATION

ROBINDRALAL ROY,
Santiniketan

There seem to be two opposite views regarding the psychological source of art: one regards art as the result of sublime inspiration the other finds the source of artistic effort in instinctual needs the satisfaction of material ambitions that guide the action of any ordinary rational and ambitious individual. Each view is correct according to the character of the art concerned. Thus Freud while regarding instinctual needs and ambition as source of art is faced with the baffling phenomenon of sublimation:

> 'There is, in fact a path from phantasy back again to reality, and that is-art. The artist has also an introverted disposition and has not far to go to become neurotic. He is one urged on by instinctual needs which are too clamorous; he longs to attain honour, power, riches, fame and the love of women; but he lacks the means of achieving these gratifications. So like any other, with an unsatisfied longing he turns away from reality and transfers all his interest and all his libido too on to the creation of his wishes in the life of phantasy, from which the way might readily lead to neurosis .... Probably their constitution is endowed with a powerful capacity for sublimation and with a certain flexibility in the repressions determining the conflict.[1]

This is perhaps generally true for all art in general with the exception of music. The world of sound is not a world of phantasy but a world of reality, though a reality of a different order. The painter's or the sculptor's world of thought and imagination has always a reference to the visible realities though they may be rendered fantastic by symbolic transformation. Even verbal language has similar references through names of objects and descrip-

1. A General Introduction to Psycho-analysis: Sigmund Freud.

tions of visual experiences. But music and its materials of sound have no direct reference to these sense experiences of life or nature. Nature is persistently visible but very little audible. A painting or a piece of sculpture may appear fantastic when it departs from known and familiar forms it distantly resembles. Without this resemblance there is no question of phantasy. Music and speech begin with materials of sound forms which have no resemblance to anything in nature like colours or solid forms. Speech is based on names associated with objects and experiences and being in general use ruled by convention would convey no meaning when this association is lost. A sketch may be fantastic but not geometrical drawing which creates its own order of reality.

Music has no such limitations as to its materials or its forms and does not promise any association with experiences of the life that we call reality. It creates an independent order of reality in sensations and forms, entirely different from the reality experienced through sight and touch. Thus musical sensations form a way of escape from the sensations of natural life and the artist musician is able to live these two different lives, both equally real, though of different orders. Mental conflict occurs when these two experiences are mutually inconsistent: the experience of an intellectual system of order and sincerity of emotional expression, and the opposite experience of social disorder and emotional insincerity that we call the hard realities of worldly life. To the artist the musical experience ultimately becomes real while the so called real life appear like a dream or phantasy.

This duality of experience is by no means peculiar to the musician; it is almost universal; the reason why people come to share the musical experience and thus be lifted out of the realities of life. This conflict between the art life and the material life is the eternal conflict between the musical content of the personality and its verbal content. Verbal language being the source of all material civilised life and the musical language being the source cultural or spiritual life the conflict is inevitable, though they may also be capable of being harmonised.

Phantasy is the parent of reality for there would be no mechanical inventions without a previous phantasy. A steam locomotive or an airship was phantasy before its invention, yet they took shape and are concrete realities now. A very elaborate development of verbal language was needed before the necessary orga-

nisation of work could be accomplished. This development of the verbal language emphasised immensely more on the sense of vision than on the sense of hearing, as in the language of mathematics and mechanics. In the formation of legal codes, property rights, statutes for labour control, and methods of taxation without which there would be no civilisation with its progressive demands on our mental and physical ability, literature in its relatively circumscribed field has been trying in vain for a sublimation of painful relationships of coercion being the musical counterpart of the verbal mind. Music is the last stand of the personality against this one-sided diabolical progress of the mind which has only immediate selfish material ends in view.

By thought and imagination we generally mean verbal thought and visual-verbal imagination completely ignoring the fact that there is a far more powerful source of thought and imagination in our musical plane of consciousness. Thousands of people, nay millions, experience this when attending musical performances. Verbal ideas are purified or sublimated by the music in songs and there are verbal elements even in instrumental music. At the conclusion of a musical performance the music persists while the words remain dissolved in it.

This purification of the verbal mind with which, as we shall presently see, libido is inseparably associated has been beautifully illustrated by the parable of the Udgīta Brāhmaṇa in the Bṛhadāraṇyaka Upaniṣad. The Asuras were able to corrupt Vāk (speech) by the original sin of selfishness and Prāṇa (the musical content of the personality) was the last stand of the Devas, which could not be corrupted. Later Vāk or the organ of speech was purified by Prāṇa (the musical personality) and remained as Agni, the fire principle. Speech or Vāk being associated with Apāna or the sex-energy is naturally the source of the libido, a thesis corroborated by various other Upaniṣads.

Thus Freudians should find strong support in the Upaniṣads when they insist that verbal expression is a release for sex repression; though without the help of music this release is only temporary and incomplete. Thus in Freud's own words:

> In psychoanalytic treatment nothing happens but an exchange of words between the patient and the physician. The patient talks, tells of his past experiences and present impres-

sions, complains, and expresses his wishes and his emotions. The physician listens, attempts to direct the patient's thought processes, reminds him, forces his attention in certain directions, gives his explanations and observes the reactions of understanding or denial thus evoked. The patient's unenlightened relatives—people of a kind to be impressed only by something visible and tangible, preferably by the sort of 'action' that may be seen at the cinema—never omit to express their doubts of how "mere talk can possibly cure anybody". Their reasoning is of course as illogical as it is inconsistent. For they are the same people who are always convinced that the sufferings of neurotics are purely 'in their own imagination'. Words and magic were in the beginning one and the same thing and even today words retain much of their magical power. By words one of us can give to another the greatest happiness or bring about utter despair; by words the teacher imparts his knowledge to the student; by words the orator sweeps his audience with him and determines its judgments and decisions. Words call forth emotions and are universally the means by which we influence our fellow creatures.[2]

The Upaniṣads however go further in giving to words a deeper psychological significance by associating it (Vāk) with sex-energy (apāna), fire (agni), the feminine principle (stree), and the earth principle (prithvi or smell). Ordinarily we are inclined to think that we acquire words artificially by conscious learning, out of close examination and introspection we find that verbal thought is involuntary and persistent and needs the greatest of mental efforts to be kept under control. The first signs of insanity are to be found in incoherence of words. All fights and quarrels are preceded by exchange of 'hot' words over which the partisans seem to have no control. Political slogans are short verbal formulae that consolidate resentment, discontent and revolt for future action of an explosive nature. Political leaders and agitators are able to stir up and direct the social verbal mind on a national scale generally for violent ends but seldom if ever for peaceful purposes. This verbal mind which has its physical seat in the abdominal region (the swādhiṣṭana chakra or the seat of the physical ego) is ever awake and the original source of libido repressed desires and

2. *Ibid.*

emotions, and has to be satisfied through dreams. This is what we may call the lower vital principle with which the six principal psycho-somatic states are associated, namely: lust, anger, greed, illusion or delusion, pride, and envy or jealousy. We may emphatically observe in this connection that these immediately and illusively pleasant but ultimately painful psycho-somatic conditions are far more developed in the educated civilised man than in the uncivilised and the uneducated. The so-called educated mind having disproportionately developed almost entirely through verbal education, lust, anger, greed, pride, and jealousy, are overdeveloped with consequent clash of self-interest both in the field of individual and collective social relationship; in the collective group-relationships the common expression of all these sources of material desires is cruelty: personal, domestic, organisational, social, class and caste-cruelty. Verbal edicts, propaganda of social and religious reformers, humanitarian speeches have universally failed against these lower vital forces of personal, domestic, and social disruption.

That Vāk or speech (words) should be so inseparably associated with sex-desire may appear somewhat incredible to those who have for centuries chained their faith to the development and improvement of the mind through verbal education. We may quote Freud again to show that modern research in the origin of language strongly supports this view:[3] this shows that words were originally used for purposes of sexual approach and response. From this primitive use of words to the modern development of language mankind has lived through millenniums in which the duration of civilised life is of almost insignificant duration. Civilised life has substituted primitive desires by partly perverted and partly sublimated desires. The perverted desires are satisfied by highly refined satisfaction of lust through visual enjoyment as on the screen and much printed literature, of anger through scientific organisation of pugnacity, of greed by intricate indirect techniques of acquiring money and power, of pride by organised snobbery, of jealousy through party spirit. The sublimated desires are univer-

3. An important clue in this connection has recently been given to us in the view expressed by a philologist (H. Sperber of Upsala who works independently of psycho-analysis) that sexual needs have had the largest share in the origin and development of language.... (*Ibid.*)

sally satisfied through unselfish efforts towards social harmony and individual well-being.

The source of this personal, domestic and social harmony is Prāṇa or the musical content of the ego which no psychologist has so far noticed inspite of the fact that music has been the most important source of psychic harmony in all highly evolved cultures, and still is the last refuge of the tortured mind in our culture-life. There are however lower states of sublimation in the three vital principles other than Prāṇa and Apāna namely contemplative creative thought (Udāna) athletics and military exercises (Vyāna), distribution and charity (Samāna). But the chief source of mental conflict is between the Verbal content and the Musical content of the ego, both having their expressions in sound forms; hence the central problem of yoga has been the achievement of harmony between Prāna and Apāna, respectively the musical and the verbal content of the ego.

The question may be asked here: if words form the chief source and expression of sex-energy how does the animal world do without words. Here we must enter into a phonetic exposition of the verbal expression. Generally speaking verbal expressions are based on the use of discordant sounds collected into an utterance. The dog barks, the lion roars, the horse neighs, the ass brays but the lark or the cuckoo sings. The animal utterances can be easily observed to have a constituent discordant sounds while the singing birds have more concordant sounds. Man has reached both extremes; he is far above the bird in the use of concordant notes in good music, and may have utterances far more disturbing and unpleasant than that of a barking dog in moments of violent rage. In the refinements of speech we cultivate minute shades of discord when we try to hurt other people's feelings through tones delicately controlled for the purpose. We are born with this ability as would be evident from the tonal expressions of the infant baby in anger and pleasure. Words and syllables are moulded on the basis of these utterances, the reason why syllables are chosen with caution by able musicians, as was done in ancient times also when Akṣaras and Mantras were constructed.

It is the harmonic part of music which is most difficult to achieve correctly like unisons, fourths and fifths. The discordant relationships are naturally indefinite and may afford to be inaccurate while the harmonic relations are exact in numerical relation

and need for their execution a subtle sense of harmony and number feeling. Strange as it may seem, most musicians fail even to produce an exact octave or unison as has been discovered through mechanical measurements. Also musical voices and musical timbre of instruments depend on the predominance of harmonics while unmusical voices are dominated by mutually discordant constituent sounds. As we are born with the ability of distinguishing between harmonious and discordant utterances the effect of music is independent of training and affects the unconcious experiences collected perhaps from the pre-natal stage of life. The listener therefore comes to the musician to have his harmonic sense stirred up and his vague sense of discord measured up on the musical scales some of which emphasise on disharmony in between octaves. Hence by simply listening to good music man understands himself better and thus conducts and controls himself better. Those who detest or dislike music have lost their soul to the lower vital desires. It is no accident that the merely verbally educated person is inclined to crime and particularly sex-crime; and when conscience rules, suffers from neurosis.

Music itself however tends to be lowered by musicians through professional jealousy and competition which brings in its wake artificial values that have nothing to do with music itself. Speed, or the rapidity of execution is the general value accepted for such competition and is itself a verbal technique. In the first place no good music has ever been composed in very rapid movement which is against the very spirit and purpose of music. Rapid pace or tempo being itself an expression of intense excitement and impatience the mind of the listener becomes unable to follow the music and helplessly surrenders as he does to the pounding noise of the railway train. The most important fact is that the musical note is a musical note because it endures: discordant note may have musical appeal when they are sustained and their relationship felt against a note of reference. But even concordant notes very rapidly succeeding each other would amount to noise. Thus music in order to have any power of sublimation has to emphasise on the slow movement on the background of which relatively rapid movements may appear beautiful.

It is not difficult to see that prevalance of such music indicates a neurotic state of the mind both in musicians and listeners. The immediate result is the damage done to the musician's own voice

and due to mutual psychic hostility raised to the spiritual plane of human life their own personalities are breaking down. Good voices are becoming extremely scarce and mental poise and harmony equally rare. Sublimation is far talk under such conditions, and such music while passing in the name of music stimulates the destructive animal passions beyond control. The musician who in the vedic age was the most important source of sublime experience now makes an exhibition of hard slave-work and like a slave expects greater reward for his application and efficiency. In the best of such music the musical phrases are cut to pieces for adjustment to conventional rhythmic and verbal patterns trying in vain to satisfy musical requirements of the mind by verbal techniques.

XXII

NATURAL AND CULTURAL PROCESSES

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There has been a persistent attempt, especially in British and American philosophies, to interpret those processes which enter into the civilizing of human beings and which together make up the various cultures of mankind as if they were continuous with biological and other natural processes. The concepts of evolution, self-development, growth, and decay have lent themselves easily to such interpretation; and many historical movements and institutions are described as if they were living beings. Though cautious scholars are usually aware of the fact that the literal meanings "life", "growth," "decay," "paralysis," "death" etc., are extended metaphorically, there is a temptation not only among poets and literary artists, for whom the use of metaphor is normal, but also among sociologists, philosophers, and moralists, whose "explanations" and descriptions should be strictly accurate, to indulge in a careless use of terms derived from the natural sciences in their social and cultural analysis. A word of critical caution may, therefore, be appropriate at this time. But I fear a word may not be sufficient, since our "wise men" are precisely those who have become most enamoured of this language and who believe that in talking vaguely about such processes they have overcome the classical contrast between "nature" and "art."

For over a century we have been accustomed to the terminologies of evolutionary philosophies and the discussions of genetic method. From the very beginning of the successful career of evolutionary ideas in the natural sciences these ideas have been surcharged with romantic implications of all sorts. I need not review them here. Suffice it to say that two extreme views have prevailed concerning the relation between man's affairs and natural processes, between human progress and natural law, between man's creations and cosmic powers: one view presupposes that there is a basic struggle between man and nature, the other, that there is

a basic harmony. In this essay I do not wish to raise this broad philosophical issue; I am concerned not with the metaphysical problems of man's place in nature, but with the importance of a distinction between certain clearly natural processes, especially the biological, and the cultural processes of construction and destruction which, though they bear certain analogies to the natural processes, should not be confused with them. To be sure, it must be admitted that the two kinds of processes are so closely interrelated in practice that they make it impossible always to draw a sharp dividing line.

Giving a few illustrations will probably be the best way to indicate the distinction I wish to emphasize and the problems involved in trying to make the distinction clear. Let me begin with the process of learning or of gaining experience in any field. It makes little difference here whether we speak of experience in an individual or of the more collective process by which mankind acquires knowledge "in the course of human experience." Here it is very important to distinguish between those processes of animal learning or animal intelligence which can be attributed strictly to human nature and those which are cultural products of human inventions. Inventiveness itself, for example, is a biological capacity which man shares with other animals but which he enjoys to an unusual degree; so also, imagination, perception, various sensitivities, etc. But the progress which the human mind has made through the inventions of language and the systematic use of symbols in communication is based on a social process whose structure is not provided by nature. This elaborate mental structure is clearly a cultural achievement or art, still being amended and perfected. It has become customary to refer to the "growth" or "evolution" of languages, symbolical processes, and conceptions or ideas, but anyone who knows the history and the structure of these processes, understands that this history and this structure is very different from a process of life or mere animal intelligence. The making of effort, including efforts of expression and communication, is no doubt a part of human nature, but the cumulative progress of refinements in symbolical arts is not literally an organic growth or natural evolution, but a series of artefacts and improvements designed to perfect a function. Accordingly, though we speak innocently enough of "living languages", we do not mean that languages are literally alive, nor do we imagine that they

"grow" literally and naturally, as a coal-bed or a valley grow. They are made and remade.

More generally still, the process by which human beings become selves or characters is a cultural process. Natural resources and energies are involved, but these natural "raw" materials are merely the instruments of the mind and of cultural arts; with them men make conventions, customs, institutions, and other cultural constructions. These are literally manufactured products of human experience and ingenuity; man makes and unmakes them. such processes of construction and destruction are clearly different from the biological processes of growth and decay, also different from geological mechanical processes.

Similarly, we speak of "the life of reason", as Aristotle did, forgetting that this is a poetic concept. Man has a natural ability to reason, but the *art* of reasoning, the development of the principles of consistency, and the systematization of inference, with all its institutional ramifications, is both more and less than "a life:" it is a history. To interpret the career of reason in the course of human civilization as a living, organic growth is a form of romanticism rather than of naturalism.

This is even more clear in the case of what we commonly call "spiritual life." The "spirit" of man, as the term is used in this context, is a cultural construct and not literally a form of life. It takes a living being to have spirit, as it takes a living being to use language. But the spirit, far from being the source of life, as some philosophies claim, is not even a living being. The spirit gradually takes form and power in certain living beings, but this gradual formation is the result of a very complicated process of learning and discipline. The cultural context is necessary to explain spiritual life, and various cultural contexts promote or destroy it. These processes which govern the spiritual "health" of an individual are quite different from the natural processes of nourishing, poisoning, decaying, flowering, etc.

The general point to which these illustrations are supposed to lead is the need for clarifying the difference between natural evolution and human history. The term "natural history", which used to be familiar, has been crowded out by the spread of evolutionary doctrine and terminology. This is a clear gain, for it bears witness to the differentiation that took place during the nineteenth

century between the naturalistic, Darwinian type of teleological explanation which arose on the grave of the old "design argument" and the social and cultural sciences, which have gradually developed their own types of design argument, free from "natural history" or cosmology. Human history, to be sure, like all processes, takes place within a natural environment, using natural resources and subject to natural powers. But historical "movements" are neither geological displacements nor biological adaptations; they are no more purely natural than they are purely logical. The formula "material dialectic" merely combines two extreme forms of romanticism into a meaningless juxtaposition of opposites. History is neither material nor dialectical in its basic structure, though natural and rational processes are both involved in it. It is basically a human product, as complicated as is man himself, reflecting his various types of deeds and misdeeds.

It used to be assumed that the basic difference between natural and cultural processes is that the former are mechanical and the latter purposive. But this has now proved to be an over-simplified distinction. There is an immanent teleology in many evolutionary processes, to which the design argument does not apply. And there are many human products which have been made by man, but not consciously or responsibly constructed for a definite purpose. Certainly, it would be rash now to assume that all human history is a single construction toward an ultimate end. For it is assuming too much to attribute a clear motive or end to most human actions, and it is assuming still more to attribute an underlying motive to all human motives. Human construction is often as much a "trial and error" process as is animal learning; it is seldom controlled experimentation on the basis of a well-formed idea or hypothesis or aim. But even this fumbling and groping in human conduct is usually far from mere animal or organic learning; it is a series of more or less satisfactory inventions for the solution of difficulties, the inventions being consciously constructed in view of an insight into the nature of the difficulties. As in animal learning, the difficulties are more consciously perceived than are the positive goals, but the understanding of the relation between means and ends is more systematic and conscious than in non-cultural learning. The most important difference, however, is that the needs or difficulties which impel men to construct and reconstruct are for the most part far removed from immediate or biological needs; the needs, too, are cultural constructs.

In short, it is no longer plausible to assume that "natural history" has a design or that human history has a single goal, and hence it is impossible to maintain the linear conception of progress, either in nature or in human affairs. There are specific evolutions and growths in nature, whose mechanisms are becoming increasingly well understood; and there are specific progresses or constructions in human arts along various lines. These human, cultural *progresses* are quite distinct from the natural *processes.*

The various schools of "emergent" evolutionism have attempted to bridge this contrast between evolutionary process and human progress by conceiving natural processes as creative of higher levels. Whitehead's system, especially, according to which any "novel occasion" is an item in "the creative advance" is clearly an attempt to coordinate natural evolution and human history. But such attempts are less "creative" than they seem to be because they exploit romantic versions of natural history and uncritical evaluations of genuine human "advance." There is no reason for supposing that an advance in human affairs is related to a general cosmic process.

T. H. Huxley did well, in the heyday of evolutionary enthusiasm, to contrast the natural and the "horticultural" conceptions of progress. But he fell into the romantic habit of assuming that the human gardener is essentially engaged in a struggle against natural selections. Such opposition between man and nature exist, as do oppositions between man and man, but neither conflict is necessarily a basic structure either for nature or for culture. Culture is not a conquest of nature, any more than education is a "mortification of the natural man." The two types of processes, natural and cultural, bear varying relations to each other and because they constantly interplay they are readily confused. Our philosophical terminologies would therefore do well to clarify the distinction instead of adding to the confusion.

THE THREE CATEGORICAL IMPERATIVES OF THE GĪTA AS THE DIVINE COMMAND

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1. Kant is well known as the rational exponent of the moral command of 'duty for duty's sake' or the categorical imperative. The imperative is what ought to be done by every rational being and it is not conditioned or hypothetical but is unconditional or categorical. It is a rational command of the moral consciousness emptied of all subjective inclination and utilitarian considerations and being universal, it admits of no exception. Human Reason says "you ought to do it" and Will says "I will do it" as 'ought' implies 'can' and this command is called the categorical imperative of duty. The Gīta command is also categorical but it is the Divine Command of Lord Kṛṣṇa to Arjuna in the battlefield and through him as *nara* to all humanity. Divinity is perfect as "The Inner Ruler immortal in the heart of the *jiva*" and the Gīta is the call of Divinity to humanity as *nara* and is the Divine categorical imperative which has the sanctity of Revelation and is not merely rational. The categorical imperative of the Gīta is therefore supramoral and suprarational and obligatory on all rational beings except the demoniac type which defies not only reason but Divinity itself.

2. The Gīta as Practical Vedanta expounds the nature of the triple reality of *prakṛti*, *puruṣa* and Puruṣottama or matter, soul and God and its three categorical imperatives are addressed to the three entities, the empirical self which mistakes itself for the body made of *prakṛti*, the spiritual self or *puruṣa* and the Divine Self. They form a progressive assent from the empirical and the spiritual to the supraspiritual. In the final state of religious consciousness, *prakṛti* and *puruṣa* are realised as the modes of Puruṣottama as the 'Inner Ruler Immortal'.

3. The Divine Command may be described as its three categorical Imperatives ending with the final call to self-surrender at

the feet of the Lord. 'The Inner Ruler'. They are summed up as follows:

(1) So act as to regard all your actions as determined by *prakṛti* and its *guṇas* or as *niṣkāma karma;*

(2) So act as to regard all your actions as means to the knowledge of *puruṣa* or *kaivalya.*

(3) So act as to regard all your actions as worship of Puruṣottama or *sarvaṁ Kṛṣṇārpaṇa.*

(4) The three imperatives are thus interrelated and are finally the command of the "Inner Ruler Immortal". In the religious sense, He may be defined as the source of the self or *atman,* its sustenance and satisfaction. The *ātman* lives, moves and has its being in Paramātman, "The Antaryamin" resides in the heart of all *jīvas* with a view to commune with them. The *ātman* renounces its bodily self or *prakrti* and also the lonely self or *kaivalya* and thus attunes itself with the 'Will of Paramātman' and is atoned with Him.

5. The imperatives are thus a progressive ascent from *prakṛtī* and *puruṣa* to Puruṣottama by means of *karma, jñāna, bhakti* and of *prapatti* which is the goal of the imperatives. *Prapatti* is the call of Divinity to the *jīva* to surrender itself absolutely to Him and it is His assurance of redemption from all its sins. The *carama śloka* states the assurance thus: "Renounce all *dharmas* and seek my feet as your sole refuge and I will free you from all your sorrows and sins and grant you *mokṣa.*" The Lord as the Saviour of all is really merciful but He requires absolute self-renouncement or self-naughting as the condition of mercy. It is the gift of Self to the Giver of Grace by giving up not merely all *karma* or *dharma* but by rooting out the egocentric sense of 'I' and 'mine' which is the root cause of sinfulness and *avidya.*

XXIV

JOACHIM'S VIEW OF TRUTH

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Joachim defines truth as follows: "Truth in its essential nature is that systematic coherence which is the character of a significant whole". A significant whole is an organised individual experience, self-fulfilling and self-fulfilled. Its organisation *is* the process of its self-fulfilment, and the concrete manifestation of its individuality. (Nature of Truth. P. 76).

This significant whole is not the mechanical or static whole constituted by fixed and determinate entities which interact in the whole in mutual relations that are but external. Instead of the constituents composing the whole which is a process, the process itself constitutes them and they are 'moments' in it. "The individuality of the whole is *both* the presupposition of the distinctive being of its '*moments*' or parts, and the resultant which emerges as their co-operation, or which they make and continuously sustain" (P. 76). "It is this process of self-fulfilment which is truth" (P. 77). The process with its concrete moments is one in which coherence emerges continuously. Joachim says on page 78 of his book:—"Truth, we said, was the systematic coherence which characterised a significant whole. And we proceeded to identify a significant whole with 'an organised individual experience, self-fulfilling and self-fulfilled'. Now there can be one *and only one* (Italics Joachim's) such experience, or *only one* significant whole, the significance of which is self-contained in the sense required. For, it is *absolute* self-fulfilment *absolutely* self-contained significance that is postulated."

When the significance of the whole is absolutely self-fulfilled, it cannot yet be self-fulfilling. It is a contradiction in terms to hold that an organic process, which, in Joachim's system, the significant whole is pictured to be, is both self-fulfilling and self-fulfilled. It cannot be both a process and the finished product. The

moments of the process move organically towards the fulfilment of the purpose of the process, viz., the absolutely self-contained absolutely individual whole, and this whole, in the sense postulated, can be only one. In his words, "the individuality of the whole is *both* the presupposition of the distinctive being of its 'moments' or parts *and* the resultant which emerges as their co-operation, or which they make and continuously sustain" (P. 76).

This only means that the whole is the presupposition and the product of the self-fulfilling process. It determines the movement of the moments in the process and gives them their direction and logic. This inherent logic and teleology in the process which emerges in higher and wider forms of self-fulfilment is what is known as 'coherence'. (See Nature of Truth P. 77). The moments are the materials constitutive of coherence, and coherence is a form—if form is the name for it—which through and through interpenetrates its materials. While the self-fulfilling process is the individuality of the whole, the 'moments' or the so called 'parts' are through and through in the process and are constituted by it. (P. 76) This view of coherence, Joachim says, assures the *concreteness* of the coherence which is truth, as against the view which found truth in formal consistency. (P. 77) All point to the conclusion that truth is a living and moving whole.

Now, is this the progress of self-fulfilment that is called the truth? 'Yes' says Joachim (P. 77). What is the self-fulfilled truth called, then? Is it also truth? In what manner does the self-fulfilled truth differ from the truth that is self-fulfilling? If it is said, 'by the degree of the emergence of coherence', then, the absolutely self-contained whole is the absolute truth which is one, and only one. It has ceased to be a process and is now a self-completed product. There are no more moments in it moving to realise yet higher emergence of coherence. There might be moments in it, but they have no higher purpose to realise by their movement, and it is the moments in the whole that move but the whole, the individuality of which has been absolutely realised in a complete manifestation, has no necessity to move. If truth be the name for the systematic coherence which is the character of a significant whole, or the name for the process of self-fulfilment which is exactly what is meant by "systematic coherence", and if the moments of the process move towards the self-fulfilment of the process which is the individuality of the whole, in other words, if truth that is the pro-

cess moves towards its own self-fulfilment in the absolute oneness and individuality of the whole, it is everybody's inference that truth *in the end* is *the* truth while the so-called process is a struggle of the truth to be born. If truth is absolute and one, it is unintelligible how it can move and why. If it moves, it surrenders its wholeness and absoluteness at once.

Again, if the individuality of the whole is *both* the presupposition (P. 76) of the distinctive being of its (moments) and the resultant of the co-operation, or in other words, the systematic coherence of the very same moments, is the absolute self-fulfilment predetermined or is it a novel emergent? If it is predetermined, the end was there at the beginning-consequently one can only say that truth has been there eternally. There was only a progressive manifestation of it in the distinctive moments. Manifestation to whom? If the individuality is the presupposition, the fuller and fuller manifestation is to the finite intelligence that comprehends. Naturally, therefore, this finite intelligence concludes, rather hastily, that truth moves in a process. It is because the distinctive moments move to higher and higher forms of coherence, it is called a process. If the moments did not move to such higher and higher forms of coherence increasingly manifesting the self-fulfilment of the individual whole, they would just be static and remain and move where they were with meaningless repetition and monotonous sameness. Such static 'moments', Joachim abhors. (P. 83-Sec. 29). Static moments give rise to no new emergent. On the contrary, coherence continuously emerges from the moments in the process (P. 77). But the insufficiency of the finite knowledge with their fragmentary grasp of the reality is no bar to the conclusion that this self-fulfilling process of truth by its own hidden logic of coherence, its inner impulse to concrete wholeness and fulfilment, attains its consummation in its complete manifestation, or perfect and integral coherence—a coherence, because it is perfect and integral, is no more a process but a product or resultant with the impulse towards the complete expression of the individuality, that guided its motion, satisfied in an absolute way. This consummated whole need not be a static whole somewhere and at some time. Space and time, if Joachim's logic is to be trusted, are within the whole. The process is temporal, otherwise it has no meaning. When the whole is reached,—the whole is no process and cannot evolve without the risk of infinite series—the process stops. Otherwise, the whole is not reached. Whatever the spatio-temporal

conditions of the moving moments, the whole in its entirety is timeless and includes space. This is precisely the reason why the the whole as an ideal for thought should for ever be beyond the comprehension of our limited intelligences. That is why truth is not the possession of any finite being yet. (P. 83—Section 29).

And when the process stops, when coherence as a process reaches the point of its self-consummation, *it ceases to be the truth.* If it is the process of self-fulfilment that is called Truth by Joachim (P. 77), as the consummated whole is self-fulfilled—and it cannot be self-fulfilled and self-fulfilling at the same time without a twist of imagination—if it can be both, then, as there is no logic in it, it can be anything, for aught we know—coherence is certainly not the name for it. A self-fulfilling whole is unintelligible because it is not a whole but only another moment in the process.

The individuality of the whole seems to have a very confused status in this coherence view of Joachim. Its nature is left in indeterminacy, and Joachim makes conflicting statements about it. In one place, he says: ".... nor *is* the individuality of the whole, except in the movement which is its manifestation. The whole *is* not, if "is" implies that its nature is a finished product prior or posterior to the process, or in any sense, apart from it". (P. 76) At the end of the same paragraph he states as against this "And the individuality of the whole is both the presupposition of the distinctive being of its moments' or parts *and* the resultant which emerges as their co-operation, or which they make and continuously sustain". (P. 76) Now it is not clear how, if the whole is not a finished product posterior to the process, it could yet be described as the resultant which emerges "as their co-operation or which they make". What is product if it is not a resultant emergent made by the co-operation of the moments?.

Again, Joachim says that the individuality of the whole is the presupposition of the distinctive being of its "moments". And, what are these 'moments'? They are through and through in the process which is the individuality of the whole and are constituted by it. (P. 76) How, in the light of this, could it still be maintained that the whole is not prior to the process? A clear statement is made with this suggestion of priority of the individuality of the whole, and then, it is contradicted emphatically later on. At least, we have got the benefit of the doubt.

If the individuality of the whole is both prior and posterior to the process, or, in Joachim's words, both the presupposition and the resultant emergent of the process, and if this individuality is that of an absolutely self-fulfilled and self-contained significant whole that is only one, at least the nature of this absolute whole in so far as it is a whole, not of its moments—is not and cannot be coherence. The self-fulfilling whole which is a process may have coherence and truth. But the absolutely self-fulfilled whole has no need for coherence. There is nothing for it to cohere with. It is one and there is no second to it. It does not move because it is self-contained and self-fulfilled in an absolute way. The concrete 'moments' may be self-contained or self-fulfilled only in a relative way. That is to say: They are said to be self-contained until they enlarge themselves and manifest a greater self-containedness in which the narrow self-containedness is included and superseded. Each stage in the process of the manifestation or the expression of the individuality of the whole is *more or less* self-contained. Because this is so, the process moves towards its own completion until it reaches the absolute self-fulfilment. Truth is the systematic coherence which characterises a living concrete significant whole. The moments cohere in a system and constitute the systematic whole. But how is one to conceive the systematic coherence of the system of the system itself?

Shall it turn upon itself and cohere with the moments again? If so, what will happen to its absolutely self-fulfilled character? To the extent the action of this coherence happens, the significant whole has not yet been born.

Joachim may say that the individual character and unity is not that of a static whole but is that of a living and developing whole. For one thing, there is no reason why a complete whole should develop, in which case, it is not complete. For another, if the conception of a static whole apart from, prior or posterior to the process is abhorent to Joachim, the question is unavoidable, viz.: why should then a significant whole be conceived at all and how was it conceived? The moments in the process inter-penetrate—why? Because they constitute a system. What is the nature of this system? Internal coherence which means the coherence of the moments. Thus the system is the truth which is coherence. If there were no system in the process, how could the moments cohere?, and why should they? If the system is nothing different

from the moments, there need not be coherence in them. They will be a loose conglomeration of independent entities. System is their immanent reason and law. It is their teleology. This immanent reason itself is distinct from the moments. Any theory that identifies the whole or, at any rate, makes the whole indistinguishable from its concrete moments forgets that the very process in which the moments get their name and their inner law of coherence can be easily differentiated from the moments in the process. This reason must be prior and posterior, if one may say so, to the process because it is governed by it through and through. This law is the truth which is given the name of systematic coherence in Joachim's analysis. All moments are the manifestations of this Truth. "Truth is linked with truth until the arrangement constitutes that network of chains of truths which is the system of ideally complete knowledge." (P. 73). Underlying all these truths, there is the Truth. All these truths are its moments. These truths cohere among themselves because they are the moments of one Truth. Thus, coherence is the nature of the finite truths because they cohere, and have to do so. Several partial truths, as they are the moments of the same Truth, cannot but cohere. But the nature of the Truth—not truths—cannot be coherence. It stands by itself self-contained and integral.

We may now go a step further and say that even the description of the nature of truths as coherence alone is doubtful. No doubt they cohere in a system. But their systematic character supposed to be disclosed at a particular point of time is not the same as what it is discovered to be at another point of time. Very frequently, apart from this supercession, the earlier disclosures are shown to be false-pretentions in the Alexandrian sense of the term. Mistaken descriptions of the world had given the impression of a fine coherence and were considered true. Later on, they had to be discarded. History is strewn with such discarded myths.

In effect, paradoxically, what is once 'true' is at another time false. Yet that this cannot be, the demands for rational thought declare. So *even to judge whether the supposed coherence is really a coherence or no requires a criterion other than coherence.* Science uses the expressions like 'caution' and "hypothesis", to denote this criterion. These expressions only mean that a theory is tentatively held, whatever its internal coherence may be, only until fresh knowledge annuls it. History has shaken our cocksureness in this matter by the way in which dogmatisms have

shamefully failed. In the scientific procedure of Inductive Analysis this is conveyed by saying that a scientific law should be the sole explanation and of all the facts. An exception could overthrow the law if it could not be accounted for by the said theory. The true description of the history of science would be that science has always proceeded on the assumption that its results are secure not because they have coherence that is real, but because they are so far free from contradiction, internal and external.

Coherence should connote coherence among propositions which are either true or false according as they are coherent or not. But coherent with what? If they are true, cohering among themselves, and if this coherence is their truth, the question remains; truth about what? What do the propositions express? Propositions are significant. They speak about something. Propositions with no reference to anything beyond themselves are meaningless and incapable of being judged true or false. When it is said that propositions may cohere, be consistent with each other and yet may be false, this meaninglessness is meant.

Whether the coherence of our descriptive propositions are the reflection of the coherence in reality, is not decided by coherence. When coherence itself is in dispute it will be to beg the question to say that two coherences cohere. This will land us in infinite regress. Our propositions may or may not be coherent with reality because we do not know reality in all its aspects yet. Our present view of reality, larger as it is than any other previous views, is yet inadequate and partial. Perhaps all human views of reality will be inadequate and partial. If reality could be known in entirety, this partial view which passes for coherent knowledge today may be false precisely because it is partial. All partial views, thus, are doomed to final failure. Only thing that we can say is that so far our picture of the world has not come across any instance that contradicts it. Our picture may not be true of reality, after all.

The propositions may be coherent internally, but this alone cannot constitute the truth of the propositions. Dream-events, for example, have their own law of coherence which is not that of waking life. There should be nothing there, outside the propositions, to which the propositions refer, to cause a jolt in the internal coherence. And this is the deciding factor. Many theories which were self-consistent and coherent accounts had to be abandoned because contradictory instances occurred, for which they could

not satisfactorily account. Not only should the theory be free from self-contradiction, and this is also non-contradiction, but it should face external contradictions and account for them. Thus, truth is that which is free from contradictions, internal and external. And, anything that is true can be so only when there is no other to it. So long as there is anything that remains unknown and unassimilated and unaccounted for, there is a possible challenge to our knowledge which must then be inadequate. This is the weakness of all relative knowledge. If, as Joachim thinks, truth is one significant whole absolutely self-contained, it knows no contradiction and there is no possibility of its supersession by anything higher. In this way, Truth, absolutely self-contained alone is. Truth is Reality and Reality is Truth.

XXV

ANCIENT GRĀMA SYSTEM: AN ELUCIDATION

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'Grāma' has occupied a very important position in the study of Indian music in the last century and for that reason it has been chosen here as a subject befitting the centenary celebration of the Madras University. During the modern age 'grāma' has been studied and discussed from different points of view and various attempts have been made at elucidating this crucial topic of ancient Indian musical theory, which, according to some, became incomprehensible in the mediaeval age. It is proposed to present here briefly the conclusions arrived at by the author after his lifelong study and research in the subject. An attempt is being made here to throw light on the ancient grāma system on the one hand and to unveil the truth that our present musical scale embodies an unbroken chain of continuity, dating back to Bharata, on the other hand.

As is well-known, Bharata is the most ancient extant authority on Indian music. Every research worker in this field, has therefore, to turn to his Nāṭyaśāstra, although only a small portion of this exhaustive treatise on dramaturgy is devoted to music. Scale forms the basis of any musical system. A student of Indian music, attempting to study its ancient tradition and to find out the connecting link between our present music and this tradition is inevitably confronted with the problem of 'grāma', because Bharata has explained his scale in the terms of 'grāma'. The mutual interval of svaras has been explained by Bharata in relation to 'grāma'. Thus 'svara' 'śruti' and 'grāma' cannot be detached from one another and 'grāma' does occupy a cardinal position in Indian music.

Bharata has mentioned only two 'grāmas' viz. Ṣaḍjagrāma and madhyamagrāma and the popular theory of triple 'grāma' or 'grāmatraya' seems to be a later innovation. The initial references to the additional 'gāndhāra grāma' are found in Nāradīya śikṣā

(dealing with Sāmagāna) and Bṛhaddeśī (dealing with 'deśī' music). All later writers have adopted the theory of three 'grāmas', but none of them has given a definite clarification of the 'gāndhāra grāma'. All of them have almost invariably mentioned it to be in vogue in 'svarga' alone. Hence a study of 'grāma' has to be restricted to two 'grāmas' viz. Ṣadja and Madhyama. Even out of these two, 'Ṣaḍjagrāma' carries more importance, because 'Madhyamagrāma' is always explained with reference to it. Hence 'Ṣaḍjagrāma' is being taken up first.

Bharata has explained a Ṣaḍjagrāma as follows:—

षड्जश्चतु:श्रुतिर्ज्ञेय: ऋषभस्त्रिश्रुति:स्मृत: ।
द्विश्रुतिश्चापि गान्धारो मध्यमश्च चतु:श्रुति: ॥
चतुश्श्रुति: पंचम: स्यात् त्रिश्रुतिर्धैवतस्तथा ।
द्विश्रुतिस्तु निषाद: स्यात् षड्जग्रामे स्वरान्तरे ॥ (ना० शा० २८)

That is, 'Ṣaḍja', 'Madhyama' and 'pañçama' carry four 'śrutis' each, 'gāndhāra and 'niṣāda' have two śrutis each and ṛṣabha and dhaivata have three śrutis each.

Thus the sequence of 'śruti' intervals in the 'Ṣaḍjagrāma' comes to 4-3-2-4-4-3-2. It may be mentioned here that these intervals are counted backwards i.e. the four 'śrutis of Ṣaḍja represent the interval between 'niṣāda' and 'ṣaḍja', and so on. These intervals may be showed as—

ni – sa – re – ga – ma – pa – dha – ni
4 3 2 4 4 3 2

The main characteristic of 'Ṣaḍjagrāma' is thus enunciated by Bharata:—

षड्जग्रामे च षड्जस्य संवाद: पंचमस्य च ।
यथा षड्जमध्यमौ षड्जपंचमौ ऋषभधैवतौ गान्धारनिषादौ इति षड्जग्रामे ।
(ना० शा० २८) ॥

This means that 'Ṣaḍja-pañçama- Samvāda' is characteristic of 'ṣaḍjagrāma'. Going further in this scale, this 'samvāda' is found between 're–dha, ga–ni and ma–sá' ('tāra ṣaḍja', which has not been mentioned by Bharata).

Bharata's description of 'Ṣaḍja pañçama-samvāda' quoted above, rules out its interpretation in terms of the cycle of fifth,

known in Western Music; though Bharata does not seem to have been ignorant of the cycle of fifth.

The octave of the above scale, when divided into two halves, presents a uniform sequence of 'śruti' intervals in each half, as follows: —

Pūrvāṅga	*Uttarāṅga*
sa – re – ga – ma	pa – dha – ni – sa
4 3 2 4	4 3 2 4

This scale resembles our 'kāfī' or 'kharaharapriyā', but is not identical with it, because the former (Ṣaḍjagrāma) has 'triśruti ṛṣabha' and the latter (kāfī) has 'çatuḥśruti ṛṣabha'.

Bharata has taken recourse to 'çatuḥsāraṇā' for verifying and demonstrating the above 'śruti' intervals. We cannot afford to deal with the details of 'çatuḥsāraṇā' in this limited space. But two important questions which spring up from the topic of 'çatuḥsāraṇā' deserve mention here: —

(i) Whether the twenty-two śruti intervals demonstrated by Bharata, through 'Catuḥsāraṇā', are equal.

(ii) Which fret of the 'Vīṇā' should be taken as the starting point of 'Ṣaḍjagrāma'?

Regarding the first question, a wrong notion has been held by many modern authors that Bharata divided his scale into twenty-two equal intervals. But this notion is groundless, firstly because Bharata's doctrine of 'svara samvāda' stands contradicted if the scale is divided into twenty-two equal intervals and secondly because some scholars have decisively proved through algebrical calculations based on the 'çatuḥsāraṇā', that the twenty two śrutis are not of equal intervals, but that there are three kinds of intervals of śrutis viz. comma 81/80, limma 256/243 and minor semitone 25/24. It will be out of place to reproduce these algebrical calculations here.

Here we are more concerned with the second question mentioned above, because 'Vīṇā' has always been the instrument for verification and demonstration of scale and the clarification of 'grāma' depends on the solution of this question.

Some mediaeval authors have fixed the scale of Ṣaḍjagrāma on the Rudravīṇā,[1] as shown in the table on the next page:

For the sake of clarity, let us see the full octave of 'Ṣaḍjagrāma' under one string of the 'Vīṇā'. These days the fourth string of the Rudravīṇā, which is tuned to madhyama, is taken as 'ṣaḍja', for practical purposes in the South. Accordingly the octave of 'Ṣaḍjagrāma' is shown in the table on p. 262. The sequence of frets has been carried forward in accordance with the injunctions of mediaeval authors, as shown in the table on the next page.

The location of the 'Ṣaḍjagrāma' on the 'Rudravīṇā', attempted by some mediaeval authors is obvious from the tables on pp. 261-262. This arrangement raises the following two problems:—

(1) As the string itself has been taken as 'ṣaḍja', it has not been possible to demonstrate the preceding three 'śrutis' of 'ṣaḍja'. One of the authors has, therefore, had to remark that even Brahmā cannot demonstrate the preceding three śrutis of 'ṣaḍja' on the 'Rudravīṇā'.

(2) The first fret is situated on an interval of two 'śrutis' from 'meru', but that has been taken as Bharata's 'triśruti ṛṣabha' and the second fret which represents the interval of four 'śrutis' from the 'meru' has been taken as the 'Gāndhāra' of 'Ṣaḍjagrāma'. Thus the intervals of two and four srutis are taken to be those of three and five srutis respectively. This has been shown in the table on p. 262. The same thing has been repeated in the Uttarāṅga regarding dha and ni. Thus 'sa- *re*- re ma- pa - *dha*-

1. A sketch of the Rudra-vīṇā is given on page 271, showing the strings and the number of frets. The scales of 'Ṣaḍjagrāma, madhyamagrāma' and our present 'śuddha svara saptaka' are also noted against the respective frets. Later, in this article, we shall have many occasions to refer to the location of these scales on the 'Vīṇā'. Readers are requested to refer to this sketch, for clarification. It may be mentioned here that there is no difference between the Rudra-Vīṇā' of the South and the Vīṇā (Sitar) of the North regarding the sequence of frets and the number of strings. The only difference lies in the sequence of tuning the strings because the first string from the left hand side of the 'Vīṇā' is tuned to madhyama in the North, whereas in the South the first string from the right hand side is tuned to madhyama. Thus the main string lies on the left side of 'Vīṇā' in the North, and on the right side of that in the South. For the convenience of readers in South, we have followed the arrangement of Rudravīṇā here.

Serial No. of frets.	Right side of the Vīṇā String No. 4	String No. 3.	String No. 2.	Left side of the Vīṇā String No. 1.	Interval of 'śrutis' from 'meru'
'meru'	'mandra ma'	'mandra sa'.	'Anumandra pa'.	'Anumaṇdra sa'.	?
1.	çyuta pa. ma.	śuddha re.	śuddha dha.	śuddha re.	3
2.	śuddha pa.	śuddha ga.	śuddha ni.	śuddha ga.	5
3.	śuḍdha dha.	sādhāraṇa ga.	kaiśika ni.	sādharana ga.	6
4.	suddha ni.	çyuta ma. ga.	çyuta ṣa. ni.	çyuta ma. ga.	7
5.	kaiśika ni.	śuddha ma.	śuḍdha sa.	śuddha ma.	9
6.	çyuta ṣa. nī.	çyuta pa. ma.	śuddha re.	çyuta pa. ma.	11

Serial No. of frets under the 4th string of the Vīṇā.	Notes of Ṣaḍjagrāma.	Śruti intervals according to mediaeval authors.		Real śruti intervals.	
		Intervals from meru.	Intervals between notes.	Intervals from meru.	Intervals between notes.
'Meru'.	Ṣaḍja	(?)	4	0	(?)
1	ṛṣabha	3	3	2	2
2	gāndhāra or çatuḥśruti re	5	2	4	2
5	madhyama	9	4	9	5
7	pañçama	13	4	13	4
8	dhaivata.	16	3	15	2
9	niṣāda or çatuḥśruti dha	18	2	17	2
12	ṣaḍja	22	4	22	5

dha - sá -' of the 'mukhārī' 'mela' has been taken to be Bharata's 'sa- re - ga - ma- p- dha - ni- sa' of 'Ṣaḍjagrāma'. Most probably, this misunderstanding might have been the result of counting the 'meru' itself as 'one' instead of zero. Really speaking, the 'śruti' intervals should be counted after the 'meru' and the 'meru' should be taken as zero, just as is done in counting milestones. The starting point is taken to be zero and not one, while counting the milestones.

Bharata's Ṣaḍjagrāma can be accurately located on the 'Vīṇā' in the following way:—

Serial No. of frets.	Notes of 'Ṣaḍjagrāma'.	'Śruti' intervals from 'meru'.	Śruti intervals between notes.
2	Ṣaḍja	4	4
4	ṛṣabha	7	3
5	gāndhāra	9	2
7	madhyama	13	4
9	pañçama	17	4
11	dhaivata	20	3
12	niṣāda	22	2
14	saḍja	4	4

The starting point of 'Sadjagrama' on the 'Vīṇa', as shown above, is justified on the following grounds:—

(i) It fulfils the injunction of Bharata that 'ṣaḍja' should be fixed on its fourth 'śruti', leaving the preceding three śrutis. This injunction clearly implies that 'ṣaḍja' should be fixed on the fourth 'śruti' from 'meru'.

(ii) The sequence of 'śruti' intervals in 'Ṣaḍjagrāma' enunciated by Bharata as 4–3–2–4–4–3–2 is accurately found on the frets of the 'Vīṇā' from this starting point without causing any disturbance in the traditional sequence and intervals of frets.

(iii) The starting point of ṣaḍjagrāma given above is supported by the indicative implications of the nomenclature of first and

fourth 'mūrçhanās' of 'Ṣaḍjagrāma' as 'Uttaramandrā' and 'Śuddaṣāḍjī' (this point will be explained later in this article).

Having located the 'Ṣaḍjagrāma' on the 'Vīṇā', it remains for us now to take up a very important question i.e. whether or not there is any affinity of our present 'Śuddhasvara Saptaka' with the Ṣaḍjagrāma'. Here we shall confine ourselves to the scale prevalent in all parts of India, except the South. This scale is known as 'Bilāvara' or 'Śaṅkarābharaṇa' and has the following śruti intervals:—

ni – sa – re – ga – ma – pa – dha – ni
2 4 3 2 4 3 2

A notion has been in vogue that this scale bears the influence of Western music or Muslim tradition. Really speaking, it is nothing but the "madhyama mūrçhanā' of 'ṣaḍjagrāma' with a slight modification. The following discussion will establish this statement.

Starting from the 'madhyama' of 'ṣaḍjagrāma' we get the following 'Svara-saptaka' on the 'Vīṇā'. (See table on p. 265).

The above 'madhyama mūrçhanā' is identical with khamāja which is known as 'Harikāmbhojī mela' in the South and which is held to have been the 'śuddha mela' of ancient Tamil music. It differs from 'bilāvala' in respect of 'ṇiṣāda' alone. The 'niṣāda' in 'bilāvala' is at the interval of four 'śrutis' from 'dhaivata', but in the 'madhyama mūrçhanā' of 'ṣaḍjagrāma', it is at an interval of two śrutis. This difference can be dissolved by taking the 'antara gāndhāra' of 'Ṣaḍjagrāma' instead of the 'śuddha gandhāra', in the 'mūrçhanā', as has been shown in the table on p. 265. In that case the interval between niṣāda and 'ṣaḍja' is reduced to two śrutis in the place of four.

The 'bilāvala' scale can be derived from 'ṣaḍjagrāma' in another way also. Taking the string itself as 'ṣaḍja', if we proceed on the Vīṇā, on the frets of the 'ṣaḍjagrāma', we get the scale of 'Bilāvala', as shown in the table on p. 266.

The 'Bilāvala' scale thus obtained differs from our prevalent 'bilāvala' with regard to 'dhaivata' alone which is 'çatuḥśrutika' in the former and 'triśrutika' in the latter.

Having established the very close affinity of our present scale with the 'ṣaḍjagrāma', we should now consider the question as

Serial No. of frets.	'Ṣaḍjagrāma'		'Madhyama'	'Murchana'
	Notes.	Śruti intervals	Notes.	Śruti intervals.
7	madhyama	4	ṣaḍja	2 from kākalī ni 4 „ śuddha ni
9	pañçama	4	ṛṣabha	4
11	dhaivata	3	gāndhāra	3
12	niṣāda	2	madhyama	2
14	ṣaḍja	4	pañçama	4
16	ṛṣabha	3	dhaivata	3
17	gāndhāra	2	niṣāda	2
18	antara and gāndhāra	2	kākalī ni or suddha ni of today	2
19	madhyama	2	ṣaḍja	2

Serial No. of frets.	'Saḍjagrāma'.		'Bilāvala' scale.	
	Notes.	Śruti intervals.	Notes.	Śruti intervals.
'meru'	niṣāda	0 or 22	ṣaḍja	0
2	ṣaḍja	4	ṛṣabha	4
4	ṛṣabha	3	gāndhāra	3
5	gāndhāra	2	madhyama	2
7	madhyama	4	pañçama	4
9	pañçama	4	dhaivata	4
11	dhaivata	3	niṣāda	3
12	niṣāda	2	ṣaḍja	2

to how the present, scale has come to be in vogue as the 'śuddha svara saptaka'. When and how did this change from the 'kāfī-like' 'śaḍjagrāma' to Bilāvala, take place? Bharata himself offers a definite answer to this question, by establishing the indispensability of 'madhyama', while describing the 'oḍava ṣāḍava' types of jātis. He says:—

मध्यमस्य विनाशस्तु कर्तव्यो न कदाचन।
सर्वस्वराणां प्रवरो ह्यविनाशी तु मध्यमः॥
गन्धर्वकल्पेऽभिमतः सामगैश्च महर्षिभिः॥ (ना० शा० २८)

The above 'kārikās' mean that 'madhyama' was accepted as the note holding supreme both in 'gāndharva gāna' and 'sāmagāna'. A close scrutiny of this supremacy of 'madhyama' reveals that the 'madhyama' of 'ṣaḍjagrāma' was the starting point of the scale used for practical purpose, in both 'Gāndharvagāna' and 'sāmagāna'. 'Avinaśī' and 'pravara-' these two epithets of 'madhyama' can be duly significant only if 'madhyama' is taken as 'ṣaḍja'. Thus our present scale, beginning from the 'madhyama' of 'ṣaḍjagrāma' is nothing new.

Now it remains to be seen as to what was the utility of 'ṣaḍjagrāma' if its 'madhyama' was to be taken as the starting point of the scale used for practical purposes. A reasonable and most probable answer to this question is that 'ṣaḍjagrāma' and 'madhyamagrāma' were devised as two parent scales embodying the two main 'saṃvādas' viz. 'ṣaḍjapañçama' and 'ṣaḍja-madhyama-Saṃvāda' respectively. But these parent scales were more or less theoretical, representing two basic types of sequence of 'śruti' intervals.

Thus we have seen that as 'madhyama' was the starting point for practical purposes, our present scale is perfectly identical with the scale in vogue in Bharata's time. It has undergone no change during all the centuries following Bharata. Our scale is also identical with the natural scale, which knows no barriers of time or space. Thus the mystery of our present scale is unveiled by Bharata's own words and it is established beyond doubt that our scale is not the result of any foreign influence.

It is hoped that this short discussion must have elucidated the 'ṣaḍjagrāma' and its relation with our present scale.

Now we shall take up 'Madhyamagrāma'. Before proceeding with the details of 'madhyamagrāma' a general remark seems to be necessary. This 'grāma' has remained enshrouded with vagueness, since the mediaeval age, when almost all authors held that their contemporary music was confined to '*ṣaḍjagrāma*' and that 'madhyamagrāma' had no place in practical music. It has been said that 'madhyamagrāma' is formed by lowering the 'pañçama' of 'ṣaḍjagrāma' by one 'śruti'.

As regards the sequence of 'sruti' intervals in 'madhyamagrāma' Bharata says: —

मध्यमग्रामे श्रुत्यपकृष्टः पंचमः कार्यः । (ना० शा० २८)

This means that 4–3–2–4–3–4–2 is the sequence in 'madhyagrāma, because 'pañçama' is lowered by one śruti and that remaining 'śruti' is counted with 'dhaivata'. Thus 'ṣaḍja-pañçama-samvāda' is violated in 'madhyama-grāma' and 'ṛṣabha-pañçama-samvāda' is established instead, Bharata says: —

मध्यमग्रामेऽप्येवमेव । षड्जपंचमवर्ज्यं पंचमर्षभयोश्चात्र संवादः ।
संवादो मध्यमग्रामे पंचमस्यर्षभस्य च ॥ (ना० शा० २८)

This lowering of 'pañçama' has probably remained a problem for many modern and mediaeval writers and they have tried to shun this problem by saying that 'madhyamagrāma' does not have much utility for practical purposes. How can the 'pañcama' of 'ṣaḍjagrāma' be lowered by one 'śruti' without causing discord on the 'vīṇā'? This is the main problem. The degree of lowering it, can however, be determined by verifying the 'samvāda' between ṛṣabha and pañçama (as has been explained by Bharata in the first process of the first śāraṇā'). But how can this lowering be practically effected on the Vīṇā? If the fret for pañçama is shifted accordingly, the strings and frets will lose mutual concord and that can never be desirable.

The nomenclature of 'madhyamagrāma' and the theory of Bharata and his successors that the first 'mūrçhanā' of 'madhyamagrāma' has to be started from 'madhyama', both these facts have led to the belief that 'madhyamagrāma' should be begun from the 'madhyama' of ṣaḍjagrāma'. But the scale of 'madhyamagrāma' cannot thus be obtained on the 'Vīṇā', because that would merely give us the 'madhyama mūrçhanā' of 'ṣaḍjagrāma'.

The characteristic of 'madhyamagrāma' viz. the violation of 'ṣaḍja-pañçama-samvāda' and the establishment of ṛṣabha-pañçama samvāda', is not at all present in the 'madhyama mūrçhanā' of 'ṣaḍjagrāma'. The difference between 'mūrçhanā' and 'grāma' may also be briefly stated here. 'Grāma' is defined as a combination of notes, which forms the basis of mūrçhanā.

ग्रामः स्वरसमूहः स्यान्मूर्च्छनादेः समाश्रयः ॥ (सं० १०)

This means that 'grāma' represents a combination of notes which is taken as the basic or parent scale, while making the 'murchanās'. An आश्रयाश्रयिभाव is maintained between 'grāma' and 'mūrçhanā', 'grāma' being the 'āśraya' and 'mūrçhanā' the 'āśrayi'. Thus 'madhyama grāma' cannot be equated with the 'madhyama mūrçhanā' of 'ṣaḍjagrāma'.

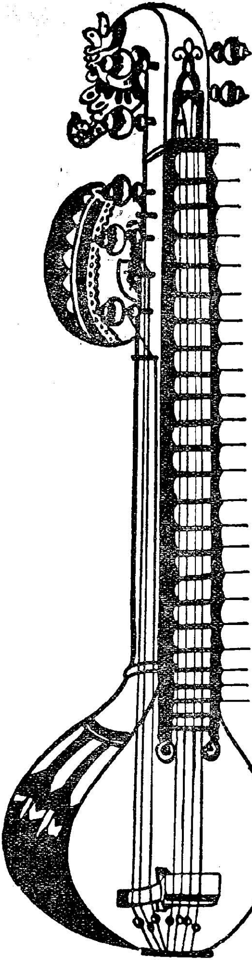
Instead of making the 'madhyama' of 'ṣaḍjagrāma', the starting point or 'ṣaḍja' of 'madhyamagrāma', we have to give the 'ṣaḍja' of 'ṣaḍjagrāma', the position of 'madhyama' in 'madhyamagrāma'. In other words we have to take the 'pañçama' of 'ṣaḍjagrāma' as the starting point of 'madhyamagrāma'. It may be remembered that the 'pañçama' of 'ṣaḍjagrāma' is the 'ṛṣabha' of our present scale. The table given on p. 270 will illustrate the 'madhyamagrāma'.

Thus the sequence of 'sruti' intervals of 'madhyamagrāma' as 4–3–2–4–3–4–2 can be accurately obtained on the 'Vina' without causing any discord therein. We have seen in the table on p. 270 that starting from the 'pañçama' of 'ṣaḍjagrāma' we have to use the 'antara gāndhāra' of 'ṣaḍjagrāma' for obtaining the 'catuhsruti dhaivata' of madhyamagrāma'. Thus the 'antara gāndhāra' of 'ṣaḍjagrāma' becomes the 'dhaivata' of 'maḍhyamagrāma'. The following extract from Bharata can be cited in support of this—

तत्र द्विश्रुतिप्रकर्षाद्धैवती कृते गान्धारे मूर्च्छनाग्रामयोरन्यतरत्वम् ।
तद्वशान्मध्यमादयो निषादादिमत्वं प्रतिपाद्यन्ते । (ना शा० २८)

धैवती कृते गान्धारे of Bharata has been explained above. Similarly गान्धारीकृत्य धैवतम् is equally true if the 'ṣaḍjagrāma' has to be understood in terms of 'madhyamagrāma'. In that case the 'dhaivata' of 'madhyamagrāma' will become the 'antara gāndhāra' of 'ṣaḍjagrāma'. The second sentence of Bharata quoted above, also points to the same starting point of 'maḍhyamagrāma', as we

Serial No. of frets.	Notes of ṣaḍjagrāma.	Notes of our present scale.	Notes of madhyamagrāma.	Śruti intervals.
2	sa	pa	ma	4 from 'meru'
4	re	dha	pa	3
5	ga	komala ni	—	2
6	ant. ga	ni	dha	2 (4)
7	ma	sa	ni	2
9	pa	re	sa	4
11	dha	ga	re	3
12	ni	ma	ga	2
14	sa	pa	ma	4
16	re	dha	pa	3
17	ga	komala ni		2
18	ant. ga	ni	dha	2 (4)
19	ma	sa	ni	2
21	pa	re	sa	4



A	B	C	D	E
meru	ni.	ma......	ga	— 0
1......	kā. ni.	ti. ma...	————	— 2
2......	Sa..	....pa..	ma —	— 2
3......	....	ko. dha..	— —	— 1
4......	re......	....dha	pa —	— 2
5......	ga......	ko. ni...	———	— 2
6......	ant. ga.	ni.......	dha.....	— 2
7......	ma.....	....Sa..	ni..	— 2
8......	....	ko. re...	....	— 2
9......	pa	..re....	sa......	— 2
10......	....	ko. ga...	————	— 2
11......	dha.	ga......	re. —	1
12......	ni.	ma......	ga......	2
13......	kā. ni.	ti. ma...	————	2
14......	sa......	pa......	ma......	2
15......	....	ko. dha.	— — —	2
16......	re......	dha.....	pa —	1
17......	ga......	ko. ni..	————	2
18......	ant. ga .	..ni....	dha.....	2
19......	ma......	sa......	ni.......	2
20......				
21......	pa......	re......	sa......	2
22......	....	ko. ga...	—— —	2
23......	dha.....	ga......	re......	2
24......	ni......	ma......	ga......	1

A — Serial No. of frets.
B — Notes of 'ṣadjagrāma'.
C — Noses of 'Bilāvala' Scale.
D — Notes of 'madhyamagrāma'.
E — Sruti intervals.

A SKETCH OF RUDRA VĪṆA

have seen in the above chart, i.e. madhyama of 'ṣaḍjagrama becomes 'niṣāda' in 'madhyamagrāma' and vice-versa.

The above starting point of 'madhyamagrāma' is also supported by Bharata's exposition of the 'mūrçhanās' of 'ṣaḍjagrāma'.[2] On seeing the seven 'mūrçhanās' of 'ṣaḍjagrāma', we find, that 'ṣaḍja-pañçama-samvāda', which is the characteristic of 'ṣaḍja-grāma' is violated in the 'pañçama-mūrçhanā'. Naturally 'pañçama' alone can be the starting point of 'madhyamagrāma'. For want of space, we canot illustrate the 'mūrçhanās' here.

It will be interesting to discuss briefly the significance of the nomenclature of madhyamagrāma. A kārikā ascribed to Nandikeśwara reads as follows : —

स ग्रामोऽस्त्विति विज्ञेयस्तस्य भेदास्त्रयः स्मृताः ।
षड्जर्षभगान्धारास्त्रयाणां जन्महेतवः ॥

That is to say 'ṣaḍja', 'ṛṣabha' and 'gāndhāra' are the starting notes of 'ṣaḍja', 'madhyama' and 'gāndāra' 'grāmas' respectively.

We have seen that, according to our present scale, (which begins from the 'madhyama' of 'ṣaḍjagrāma' according to the age-old tradition) 'ṛṣabha' is the starting note of 'madhyamagrāma'. If we wish to get the 'mandra sthāna' of 'madhyamagrāma' on the 'Vīṇā', we can start from the second fret under the second string of the 'Vīṇā' which is just adjacent to the main string (madhyama). As the second string is tuned to 'ṣaḍja', the second fret under that string would represent its 'ṛṣabha'. This too supports the theory of 'ṛṣabha' being the starting point of 'madhyama' grāma. 'Sa re ga' are accepted to be the cardinal notes in music, just, as 'अ इ उ' are in 'vyākaraṇa', because 'pa dha ni' is merely a resounding of

2. As the fourth mūrchanā of ṣadjagrāma is named 'śuddhaṣādjī' and as that name implies that that 'mūrchanā' embodies the basic scale of 'ṣadja-grāma'. We should always start the sequence of the 'mūrchanās' of 'sadja-grāma' from the 'madhyama' of the starting point of 'sadjagrāma'. Then alone can we get the basic scale of the 'sadjagrāma' on the 'Vīṇā', in the fourth 'mūrchanā' 'śuddhaṣāḍjī' in the descending scale. This starting point of the 'mūrchanās' of 'ṣaḍjagrāma' is also indicated by the name of the first 'mūrchanā-uttaramandrā', which implies that we have to proceed towards 'mandra' in the sequence of 'mūrchanās'. Starting the first mūrchanā' from the 'madhyama' of 'sādjagrāma', we get the 'pañcama-mūrchanā' as the last one.

'sa re ga' in the 'uttarāṅga'. 'Madhyama' is so-called because it is intermediary between 'sa re ga' and 'pa dha ni'. Now we can see that 'ṛṣabha' being in the middle of the trio 'sa-re-ga', it can be called 'madhyama' in that sense and the parent scale originating from it can be called 'madhyamagrāma'.

Our present scale of 'Bilāvala' has very close affinity with 'madhyamagrāma' also, because our 'ṣaḍja' is the 'niṣāda' of 'madhyamagrāma' and our scale is accurately obtained in the 'niṣāda-mūrçhanā' of 'madhyamagrāma'.

The 'Bilāvala' scale has both the 'ṣaḍjapañçama-' and 'ṣaḍja-madhyama-samvāda' characteristic of the two grāmas. 'sa- pa', 'ga-ni and 'ma-sa' have 'ṣaḍja pañçama samvada' and 'sa-ma', 're pa', 'ga-dha' and 'pa-sa' have 'ṣaḍjamadhyama samvada.'

The above discussion, directly based on Bharata, should undoubtedly prove that both the 'grāmas' are alive in our present-day music and that an unbroken chain of continuity binds us to our ancient musical tradition. The 'mūrçhanās' of both these 'grāmas' and the varieties of those 'mūrçhanās' as 'ṣāḍava-oḍava' etc. are also extant in our ragas. The two characteristic samvādas of Bharata's two 'grāmas' are also alive in our music.

Our 'Svaraśāstra' has been elaborately dealt with in the first part of my work entitled 'praṅava-bhārati', published very recently. The connection of our present Rāga system with ancient tradition will be dealt with in the next part of that work.

If the above discussion based on an elucidation of the ancient grāma system, regarding the very close connection of our present scale with Bharata's tradition, appears authentic and convincing, if the 'Vidvāns' of South agree to the views expressed therein, then our two 'paddhatis' of music which have much in common, can come together and superficial differences can be dissolved. On the occasion of the centenary celebration of the Madras University which is close to the land of 'Ādi' Śaṅkarāçhārya', the august propounder of 'Advaita', we pray for the prevalence of 'advaita' in the field of our music! 'Advaita' alone leads to bliss and may we be worthy of that bliss.

PART TWO

HISTORY OF THE
RESEARCH DEPARTMENTS
(HUMANITIES)

DEPARTMENT OF INDIAN HISTORY AND ARCHAEOLOGY

Critics of University education of the last century frequently drew attention to the fact that Indian Universities had been functioning merely as affiliating and examining bodies, neglecting the promotion of research and the furtherance of knowledge. It was with a view to obviating this drawback that the Madras University sought to utilise the special grant of Rs. 65,000/- bestowed on it by the Government of India in 1912, for the creation of a Chair of Indian History and Archaeology along with those of Comparative Philology and of Indian Economics. Dr. S. Krishnaswami Iyengar, M.A., Ph.D. was appointed as the first Professor of Indian History and Archaeology in 1914. The appointment of Dr. S. Krishnaswami Iyengar was in the first instance for five years and it was renewed twice, first in 1919 and again in 1924 for a fresh period of five years on each occasion. Studentships were awarded from 1914 for conducting research under the supervision of the Professor. One of the earliest branches of research instituted by the University of Madras, the Department of Indian History and Archaeology has been functioning for over forty years now.

By the Madras University Act of 1923, which effected a reorganisation of the University, the Department of Indian History and Archaeology was enlarged by the creation of the posts of a Reader and Lecturer. Provision was also made for the grant of Fellowships in addition to the existing studentships for the purpose of prosecuting research on the subject. In pursuance of the scheme outlined by the Act of 1923, Mr. P. T. Srinivasa Iyengar M.A. was appointed the Reader and Mr. V. R. Ramachandra Dikshitar M.A. the Lecturer of the Department.

When in 1929 Dr. S. Krishnaswami Iyengar retired from University service, Mr. K. A. Nilakanta Sastri M.A. succeeded him as Professor and he held the Chair of Indian History and Archaeology till his retirement in August 1947. Dr. N. Venkataramanayya M.A., Ph.D. who succeeded Mr. P. T. Srinivasa Iyengar as Reader in 1931 occupied the position till November 1946. Dr. T. V. Mahalingam M.A., D.Litt. was appointed Reader in August 1947 and Dr. M. Arokiaswami M.A., Ph.D. became Lecturer in July

1948. Mr. V. R. Ramachandra Dikshitar who had acted as Reader more than once became Professor of the Department in August 1947 and he held the office till 24th November 1953 when he passed away suddenly. Dr. K. K. Pillay M.A., D. Litt., D. Phil. (Oxon) was appointed Professor of Indian History and Archaeology in September 1954. In June 1955 Dr. T. V. Mahalingam was deputed by the University to undergo training in Epigraphy and Archaeology for one year under the guidance of the Department of Archaeology of the Government of India. On the completion of his training in June 1956 he was promoted as Ag. Professor of Archaeology. Dr. Arokiaswami became Reader with effect from April 1955.

The Professors, Readers and Lecturers of the Department have all along been engaged in researches on the different branches of Indian History and Archaeology. While numerous problems of Indian History remained unexplored it was felt that the field of South Indian History had been totally neglected. Naturally the first Professor, the late Dr. S. Krishnaswami Iyengar, threw himself into the task of utilising the historical material imbedded in the ancient Tamil classics, most of which were brought to light only by the close of the last century. Arduous and exacting as this labour was, he applied himself to it with great zeal and produced such works as the 'Beginnings of South Indian History', 'Contributions of South India to Indian Culture' and 'Manimekhalai in its historical setting', to mention but a few. Research students were set to work on the little known dynasties like those of the Pallavas and Nayaks and the foundations of a school of research on Indian History were truly laid.

Mr. P. T. Srinivasa Iyengar continued for the most part on the lines initiated by Dr. S. Krishnaswami Iyengar and concentrated on the investigation of the historical data in the Taml literature. Among his works, his 'Pre-Aryan Tamil Culture' and 'History of the Tamils' are connected with this branch of investigation.

Mr. K. A. Nilakanta Sastri, the second Professor of the Department was a specialist in the history of the Cholas and Pandyas. His 'Colas' and his 'Studies in Cola History and Administration' constitute distinct contributions to the study of an outstanding dynasty in South Indian history. Another branch of his researches turned on the cultural expansion of South India on the east and his 'South Indian influences in the Far East' and 'Sri Vijaya' are the

works produced by him in this field of investigation. In 1933 the Department was entrusted with the work of editing and summarising the vast mass of material contained in the Mackenzie Manuscripts. The work was completed in 1955.

Dr. Venkataramanayya brought to bear his knowledge of Telugu in particular on the study of problems of South Indian History and a great part of his research was devoted to the study of the once 'Forgotten Empire of Vijayanagar' and his 'Studies on the Origin and Early History of Vijayanagar,' 'Third Dynasty of Vijayanagar' and 'Further Sources of Vijayanagar History' come under this category.

Mr.V. R. Ramachandra Dikshitar was connected with the Department for nearly three decades and naturally he has made contributions to different branches of Indian history. The history of administration, the study of Tamil literature as a source of history and the assessment of Puranic literature in relation to History were the various sections on which he has made contributions.

Dr. T. V. Mahalingam's special field of work is the history of administrative development which have been embodied in his 'Administration and Social Life of Vijayanagar' and 'South Indian Polity'. Dr. Arokiaswami has devoted his attention to the reconstruction of local history on the basis of the literary and epigraphic sources as a result of which works like 'The Velar Basin' and 'the Kongu Country' have been produced and he is engaged at present in the history of the 'Sangam Tamils'. Dr. K. K. Pillay who had published a monograph on the 'Suchindram Temple' and a 'History of Local Self-Government in the Madras Presidency' is now working on the 'Social History of the Tamils from the early times to the present day.'

The Research students and Fellows of the University who have worked in the Department have covered different fields of research which were more or less coordinated with those branches of study on which the Professors, Readers and Lecturers were themselves specialising from time to time. Thus the study of local dynasties was a fertile and essential field of investigation and monographs on several kingdoms, in the Andhra, Tamil, Malayalam and Kannada areas have been produced. The religious history of South India, as for example, the fortunes of

particular religions like Jainism, Buddhism, Saivism and Vaishnavism have been the subjects of study. Temples have played a large part in South Indian history. The South Indian temple was the nucleus around which centred the religious, social and cultural life of the people. Naturally several important temples of South India like those of Srirangam, Tiruvorriyur and Draksharma have become the subjects of intensive study by research students of the University.

The administration of the country both in the near and distant past have provided important fields of investigation. Following the lines chalked out by Dr. S. Krishnaswami Iyengar in his 'Administrative Institutions with reference to South India' and Mr. Ramachandra Dikshitar in his 'Hindu Administrative Institutions' and 'Mauryan Polity' and 'Gupta Polity', students have studied the administrative development in the early period and also in the modern era after the British system of administration was organised.

Now the scope of history has become immensely wide. History is no longer a mere record of kings and queens, wars and treaties. It is increasingly realised that it is the life of the common people, their customs and manners, ideals and aspirations, culture and civilization that constitute the real history of a people. Besides the researches on the political history which have also incidentally described the social life and institutions, there have been exclusive studies on social development from time to time. These have been done in respect of South India under the Pallavas, Kakatiyas, Vijayanagar and so on.

Fortunately endowments have been made in this University for certain lectures to be delivered on original themes pertaining to Indian History and Archaeology. The Sir William Meyer Lectures in alternative years, the Sankara Parvati lectures each year, the Diwan Bahadur K. Krishnaswami Rao Lectureship in alternate years and the Sir Subramania Iyer Lectureship once in three years have been available for lectures in Indian History and Archaeology. Contributions in several interesting subjects have been produced in the shape of these lectures many of which have been published. The Sir William Meyer Lectureship, in particular, which happens to be the most richly endowed one of the series has provided the opportunity for the Madras University to have the benefit of the researches and special studies of

scholars all over India. Thus Dr. D. R. Bhandarkar, Dr. Radhakumud Mookerji, Dr. R. C. Majumdar, The Rev. Fr. Heras, Sir Jadunath Sarkar are some of the great names associated with these lectures and all their contributions have been published.

During the period extending nearly over half a century this Department has made an attempt at organising and conducting research on certain aspects of History of India and in particular of South India. The history of specific regions and dynasties, of religious growth, of administrative developments and of social life are some of the branches on which work has been done. In the field of research, as indeed of knowledge in general, there is and can be no saturation point. Complacency is the worst sin in the sphere of learning. Though something tangible has been done, much remains to be done and it is for the future with all the progress made in the past to make great strides.

(A list of subjects on which work has been done in the Department is given in the annexure).

Annexure

1. Sources of Vijayanagar History.
2. Historical Inscriptions of South India.
3. The Evolution of Hindu Administrative Institutions in S. India.
4. Social Legislation under Hindu Governments.
5. A Little Known Chapter of Vijayanagar History.
6. The Beginnings of South Indian History.
7. Contributions of South India to Indian Culture.
8. South India and her Muhammadan Invaders.
9. Hindu India from original sources.
10. A Short History of Hindu India.
11. The Early History of Vaishnavism in South India.
12. Penugonda.
13. Manimekhalai in its Historical Setting.

(*Dr. S. Krishnaswami Iyengar*)

14. History of the Tamils.
15. The Stone Age in India.
16. Pre-Aryan Tamil Culture.

(*Mr. P. T. Srinivasa Iyengar*)

17. Studies in Cola History and Administration.
18. The Colas (First Edn. and Second Edition).
19. Foreign Notices of South India.
20. Historical Method in relation to problems of S. Indian History.
21. Sri Vijaya.
22. South Indian Influence in the Far East.
23. The Pandyas.
24. Nalanda.
25. Agastya.

(K. A. Nilakanta Sastri).

26. Vijayanagar—Origin of the city and empire.
27. Studies in the Third Dynasty of Vijayanagar.
28. Velugotivarivamsavali.
29. The Early Muslim Expansion in South India.
30. Further Sources of Vijayanagar History.
31. Rudra Siva.

(Dr. N. Venkataramanayya)

32. Hindu Administrative Institutions.
33. Mauryan Polity.
34. Some aspects of the Vayu Purana.
35. The Matsya Purana—a Study.
36. The Lalitha Cult.
37. Studies in Tamil Literature.
38. Silapaddikaram.
39. Kulottunga III.
40. War in Ancient India.
41. Origin and spread of the Tamils.
42. South India and China.
43. Tirukkural.
44. The Gupta Polity.
45. The Purana Index.

45a. Pre-Historic South India.

(V. R. Ramachandra Dikshitar)

46. Administration and Social Life under Vijayanagar.
47. Economic Life in the Vijayanagar empire.
48. The Banas.
49. South Indian Polity.

(Dr. T. V. Mahalingam)

50. The early history of the Vellar Basin.
51. The Kongu country.

(Dr. M. Arokiaswami)

51A. The Early History of Nanchinad.
52. The Suchindram Temple.
53. History of Local Self-Government in Madras Presidency. (*Dr. K. K. Pillay*)
54. The Nayaks of Madura. (*R. Sathianathaier*).
55. History of the Pallavas. (*R. Gopalan*).
56. Origin and Early History of Saivism. (*C. V. Narayana Iyer*)
57. Economic conditions in South India. (*Dr. A. Appadorai*)
58. Administration and Social Life under the Pallavas. (*Dr. C. Minakshi*)
59. Early History of the Andhra country. (*Dr. K. Gopalachari*)
60. Dutch beginnings in India proper. (*T. I. Poonen*)
61. Report on the Modi Manuscripts in the Tanjore Palace Library. (*R. S. Shelvankar*)

(Nos. 1 to 61 *have been published*).

62. Development of Local Self-Government in the Madras Presidency.
63. Telugu Chodas.
64. Early Revenue Settlements in the Madras Presidency.
65. Early History of the Chera country.
66. District Administration in the Madras Presidency.
67. Political condition of South India in the latter half of the 17th century as seen from Francois Martin.
68. Historical Material from the Prabandhas.
69. The Political History of Malabar, 1792-1901.
70. History of Tellicherry Settlement, 1700-1792.
71. The Reddi Kingdom.
72. History of the Andhra country—Subsidiary dynasties, 1000-1500 A.D.
73. Judicial Administration in the Madras Presidency to 1750.
74. Buddhism in South India.
75. Organisation and Administration of the Factory Settlement at Madras in the 17th century.
76. Studies in the Arthasastra of Kautilya.
77. Maratha Expansion in South India.
78. Eastern Ganges.
79. Township in Ancient South India.
80. Western Chalukyas.
81. The Bhimesvar temple at Draksharama.
82. Tamil Saints of South India.
83. The Hoysalas.

84. The Temple of Tiruvorriyur.
85. Western Gangas.
86. History of the Velanadu Chiefs.
87. History of Northern Circars 1750-1800.
88. The Great Epic of the Tamils—its historical value.
89. Social and Economic conditions under the Kakatiyas.
90. Relations betwen the Governments of Madras and Bengal, 1773-84.
91. Srirangam and Trichinopoly from inscriptions.
92. A Century of Madura 1736-1836.
93. Yadavas of Devagiri.
94. History of Land Revenue Administration in the Madras Presidency.
95. The Nayakas of Ikkeri.
96. The history of Indian Railway Policy, 1845 to the present day.
97. South India and Ceylon from very early times to Vijayanagar.
98. Early Governors of Madras, 1752-1803.
99. History of Kurnool.
100. The contacts of Kerala with the outside world.
101. History of Conjeevaram.
102. Jainism in the Karnataka.
103. Economic Background of English Settlements in India in the 17th century.
104. History of Sri Sailam Temple.
105. Madura through the Ages.
106. Jainism in South India.
107. The Early History of the Madras Region up to 1650.

The members of the Department have also contributed a number of papers to various learned periodicals from time to time.

DEPARTMENT OF INDIAN ECONOMICS

Genesis of the Department.

The Government of India made in 1912 a recurring grant of Rs. 65,000 and a non-recurring grant of Rs. 4 lakhs (followed by another Rs. 3 lakhs in 1913) to the University of Madras "to enable the University to take a definite step forward towards the realization of the idea of a teaching university for higher work". The Syndicate Committee constituted to formulate a scheme for the best method of utilizing the grants suggested, among other things, the institution of two Professorships, one in Economics and one in History and Archaeology. Thus the Economics and History Departments have the distinction of being the oldest research departments of the University.

In 1915 the University appointed Dr. Gilbert Slater, M.A.,D.Sc, Principal, Ruskin College, Oxford, to the University Chair of Indian Economics.

1915-1921

Dr. Slater's attention at the outset was directed towards acquainting himself with the economic and social life of South India and arousing a keen interest among the public in economic problems and research. In the first two years of his office he visited mofussil centres to get a comprehensive picture of rural life and its problems.

The work of the Department from its inception was organised on three lines, namely, teaching, research and guiding students in economic research. Though the emphasis on each aspect of this work has varied with time, they still continue to be the main lines on which the work of the Department is based.

The teaching work, until the Diploma Course in Economics was started, consisted of giving lectures dealing with the application of economic theory to Indian, particularly South Indian, conditions, not only to Honours students in colleges in Madras but also in Trichinopoly and Trivandrum. The Diploma Course in Economics, which was started in July 1918, offered a full-time course of

one year's duration and a part-time course of three years' duration. In order to assist the Professor in conducting these classes, the Syndicate appointed two assistants. By 1919 it was decided to have a permanent staff of one Assistant Professor and two Readers to make the Diploma course serve as an extension of economic teaching in the University. The last three years of Dr. Slater's term as Professor of Economics were taken up with organising the teaching work of the Diploma and placing it on a sound basis.

The contact which Dr. Slater had with rural life in the course of the study tours found expression in the launching of village surveys to collect information regarding rural conditions. It also trained students for conducting rural surveys. He was the pioneer in village survey work in South India. These surveys emanated from a suggestion made in 1913 by Sir Theodore Morrison in his Inaugural Address to the Madras Economic Association that an economic enquiry in the Madras Presidency should begin with a sociological and statistical survey of typical Indian villages. This pioneer venture of the Economics Department of the Madras University was appreciated very much by the Government and the public.

The villages chosen for survey by Dr. Slater were not chosen as representative of any special types. It was done on the basis of purposive selection with a view to their accessibility to the investigators who were mostly students in Honours classes in colleges of the University. The data were collected on the basis of a questionnaire drawn up by Dr. Slater to elicit information on various aspects of economic and social life in villages. Dr. Slater visited most of the villages surveyed to guide and assist the investigators in their work. The results of the survey of twelve villages was embodied in the book "Some South Indian Villages", edited by Dr. Slater.

Dr. Slater served as a member of the Board of Agriculture of the Government of India and of the Publicity and Salaries Boards.

1922-1927

During this period there were frequent changes of the staff of the Department. Dr. John Matthai, Professor of Economics, Presidency College, acted as a part-time Professor from 1922 to 1925.

On his resignation, Mr. T. K. Duraiswami Ayyar acted as Professor till June 1927. The work of the Department then consisted mainly of conducting the Diploma classes. Consequent on the introduction of V-b Economics for B.A. (Pass), the full-time diploma course, which was not popular, was abolished from 1926 and the part-time course was reduced from three to two years. In 1925 an innovation was made by way of giving instruction in the economic subjects comprised in the course of III-B. A. (Honours). This was however given up from the commencement of the academic year 1928-29, as it was felt that the University should not undertake college teaching for University courses in Economics.

The Department was placed on a permanent basis in 1925 as a result of the Government grant to the University.

The desirability of having a reference library for the use of the Department was suggested by Dr. Gilbert Slater, but it was only in 1923 that the foundations of such a library were laid. In 1924 it contained 1,800 books, 3,000 Government publications and 25 periodicals. Each year there have been new additions to the library.

1927-1946

The period marks a definite phase in the development of the Department as a centre of research and its emergence as an active participator in disseminating knowledge on various economic problems of the day. It has also produced considerable literature on research into various subjects in Economics both by the staff and the research students. The earlier emphasis on the teaching work of the Department was replaced by a greater concentration on research pertaining to the economic conditions of the period. Obviously, it is a realization that an economist can be of considerable help in clarifying and elucidating important economic issues.

There was a clear demarcation of the field of research among the three members of the staff. But there was no strict compartmentalization of work and each member of the staff contributed a number of papers on subjects outside his special field of interest. Dr. P. J. Thomas specialised in Public Finance and Dr. P. S. Lokanathan made a study of industrial problems with special reference to India. Mr. K. C. Ramakrishnan, interested himself in Rural Economics and Co-operation.

An examination of the papers contributed by the various members of the staff reveals how closely their research followed the trend of events of the period. The first important issue in chronological order is the Great Depression which began to manifest itself in 1929. Papers on this subject analysed the effect of the depression on trade, prices, employment, etc., and suggested measures for combating it. Next was the problem of over-population which became crucial after the Census of 1931. The question of exchange depreciation, the reallocation of finance between the Centre and the Provinces consequent on the introduction of the new Federal constitution, the establishment of the Reserve Bank of India and the financing of the war were the other crucial issues of the time and on each of them the Department produced literature, which, by analysing the situation, led to the clarification of ideas and understanding of the problems in their proper perspective.

An appreciation by Government of the value of academic contribution resulted in the appointment of economists on committees of enquiry. The staff of the Department was represented on some of the committees appointed for various enquiries. The Professor worked as a member of the Provincial Banking Enquiry Committee, the Agricultural Sub-Committee of the Provincial Economic Council, the Rice Committee of the Imperial Council of Agricultural Research, the Madras Committee on Co-operation, and the Consultative Committee of Economists. He was made the Chairman of the Fact Finding Committee (Handloom and Mills). Dr. Thomas was also a member of the Provincial Legislative Council. Dr. Lokanathan also served on the Consultative Committee of Economists.

Among the other activities of the Department, the most noteworthy was a resurvey of villages that were surveyed by Dr. Slater. The resurvey was undertaken by the Department in 1936 to study the effects on rural life of the multitudinous forces, economic and political, which were unleashed in the intervening period. Such resurveys had the seal of approval of the Royal Commission on Agriculture in whose opinion, "for the systematic promotion of the welfare and prosperity of the agricultural population, exact and detailed information is required of the forces at work tending to produce a decline or improvement in their economic condition".

The resurvey in the case of six villages was entrusted to research students of the Department, who stayed for some months in the villages allotted and made all enquiries. The questionnaire of Dr. Slater was slightly modified to collect more details. The resurvey revealed a general deterioration in the condition of the villages, as the effects of the improvements during the period were outweighed by the defects in the Indian rural economy.

At the suggestion of the Government of Madras, a survey of the Salem District was undertaken in 1937-38 with a view to examine the economic effects of prohibition on the different sections of people in the district. The work was carried out by students. Family budget studies of a number of families selected on a random sampling basis, supplemented by case studies of a large number of addicts, were made and the conclusion was that prohibition had produced good results in Salem.

In 1943 the three members of the staff left the Department. Dr. Thomas was granted leave to take up an appointment with the Government of India. Dr. P. S. Lokanathan also was granted leave to take up the editorship of the *Eastern Economist.* Mr. K. C. Ramakrishnan resigned to take up the post of Lecturer in Agricultural Economics at the Agricultural College, Coimbatore. In his place Mr. C. W. B. Zacharias was appointed Lecturer in October 1943. When Dr. Lokanathan resigned his post in 1944, Dr. R. Balakrishna was appointed Reader in his place. He was promoted Professor in December 1946 when Dr. Thomas resigned his post.

1946-1956

The epoch making developments in India during the last ten years have had a significant effect on the work of the Department. The rapid succession of events has not only increased the tempo of its work but also enlarged the sphere of activities in which it can make effective contribution. The full utilization of this opportunity enabled the Department to function as a centre for higher research work, which was the chief aim of instituting it.

The precedent set up in earlier years of dividing the field of research between the members of the staff continued. Dr. R. Balakrishna, Professor, interested himself in industrial problems and planning. Dr. R. N. Poduval (from October 1947 to March 1952) chose financial problems. Mr. C. W. B. Zacharias, who was Lecturer till 1952 and Reader till his appointment as Deputy Director of the

Agricultural Economics Research Centre in 1954, worked on agricultural planning. Dr. D. Bright Singh who was appointed Lecturer in January 1953 continued the work of Dr. Poduval. Apart from working on their special fields of study, each member of the staff also contributed papers on other subjects of current interest and importance to the economy of the country. A noteworthy feature of this period is that the staff of the Department worked to a greater extent than in previous years on problems of current and immediate interest to the country. Research on problems not of immediate importance was assigned to research students. The division of work has enabled the staff to keep abreast of events and give a lead to economic thought as occasions arose.

The events of this period, though political in nature, have had far-reaching economic consequences. The problems of post-war economic reconstruction, the search for a new set-up of international economic relations and currency revaluations were of global significance. Added to this, the Indian economy had to face the consequences of the Partition. The country also launched on development planning, with an emphasis on welfare. The literature contributed by the staff reflects the trend and significance of all these events to the Indian economy.

On the teaching side, the Department is responsible for the running of the Diploma Course in Economics and for lectures on Public Finance to the Diploma Course in Politics and Public Administration. It has also to undertake inter-collegiate lectures for Economics Honours students. On the administrative side, the Professor is not only in charge of the Department of Economics but also of the Department of Journalism which was created in 1947. The administrative work has increased further with the starting of various research units under his control.

In order to examine the problems that were thrown up by World War II and its aftermath, the Government of India set up consultative bodies and committees of enquiry to elicit academic opinion. Dr. R. Balakrishna, Professor, served on the Consultative Committee of Economists, the Cotton Textile Industry Enquiry Committee, the Cenral Advisory Council of Industries, the Research Programmes Committee of the Planning Commission and on the Panel of Economists constituted for advising the Government in the drawing up of the Second Five Year Plan. He also

served as a member of the Committee on Co-operation set up by the Government of Madras.

During recent years the Department has also undertaken special work on behalf of the Planning Commission and some of the other Departments of the Government of India. Under the auspices of the Research Programmes Committee of the Planning Commission it has undertaken an economic survey of the City of Madras. It is an enquiry which has to be covered in a period of about 4½ years. Special staff has been appointed for the purpose with a Deputy Director. The Professor of the Department is its Hon. Director.

The Ministry of Food and Agriculture has set up in the University, under the direction of the Professor of Economics, a research centre in Agricultural Economics. It engages itself in fundamental research in Agricultural Economics and also conducts economic surveys of selected villages in the States of Madras, Andhra, Mysore and Travancore-Cochin. This Research Centre has also been entrusted with a study of the economics of farm management in two districts in Madras. The work is to extend over a period of 3 years to complete a crop cycle and the work is being financed by the Research Programmes Committee of the Planning Commission. Special staff has been recruited for the Agricultural Economic Research Centre and for the studies in Farm Management. There is a Deputy Director and a Special Officer in direct charge of the work along with the overall supervision of the Professor of the Department.

The Ministry of Commerce and Industry had entrusted to the University the work of making an economic survey of the handloom industry in Madras State. A special unit was set up for the purpose in April 1955 in the Department of Economics under the supervision of the Professor of the Department. The Unit completed its work in October 1956.

On disbanding of the Unit a new Unit has been set up under the same auspices for estimating the impact of the expenditure of the Cess Fund on the Handloom Industry in the State. The new Unit consists of a nucleus permanent staff tenable during the second Five Year Plan period. The Unit is under the supervision of the Professor.

Since January 1956 the Department of Economics has been expanded with the aid of a grant from the Ford Foundation. The

purpose of the grant is to impart training in methods of applied social science research. Special staff has been recruited for the purpose and trainees of different levels of academic achievement are selected for the purpose and paid stipends according to their qualifications. They are taught, both through lectures and seminars, the methodology of research in social sciences. Training in field work is also imparted to them. The Professor of the Department administers the Unit and arranges for the training.

A list of books by members of the Department and a list of personnel of the Department are appended.

List of Publications by the Staff of the Department.

Dr. *Gilbert Slater,* 1915-1921.
No. of articles: 6.

Departmental Work:

Some South Indian Villages (Edited by).

Dr. P. J. Thomas, 1927-1946.

Book:
Growth of Federal Finance in India (1939).

Booklet:

The Problem of Rural Indebtedness in India.
No. of articles: 74.

Departmental Work:

Commodity Prices in South India, 1918-1937 (1939) (in collaboration with Sri N. S. R. Sastry).
Indian Agricultural Statistics (1939) (in collaboration with Sri N. S. R. Sastry).
Some South Indian Villages: A Resurvey (1942) (Edited by Prof. P. J. Thomas and Sri K. C. Ramakrishnan).
The Economic Results of Prohibition in Salem District (1939).

Dr. P. S. Lokanathan, 1918-1944.

Books:
Industrial Welfare in India (1929).
Industrial Organization in India (1935).

Booklet:

Industrialization (Oxford Pamphlets on Indian Affairs, 1943).

No. of articles: 49.

Mr. K. C. Ramakrishnan, 1921-1943.

No. of articles: 62.

Dr. R. Balakrishna from 1944.

Books:

Industrial Development of Mysore (1940).
Regional Planning in India (1946).
Measurement of Productivity in Indian Industry (1953).
Recent Trends in Indian Finance (1955).
Studies in Indian Economic Problems: Collected Papers (1954).

Booklets:

Future Prospects of War-Expanded Industries (1945).
Restoration of Economic Stability (1950).
International Economic Relations (1952).
India in a Changing World Economy (1950).
Tariff Policy in India (1952).

No. of articles 53.

Dr. R. N. Poduval, 1947-1952.

Book:

Finances of the Government of India since 1935.

Booklet:

Recent Trends in India's Foreign Trade.

No. of articles: 15.

Mr. C. W. B. Zacharias, 1943-1954.

Books:

Madras Agriculture (1950).
Agricultural Planning for Madras (1953).

Booklet:

Finance of Indian Planning (1948).

No. of articles: 26.

Dr. D. Bright Singh, 1953-1955.

No. of articles: 12.

Staff of the Department of Indian Economics.

Professors:

Dr. Gilbert Slater. — December 1915 to June 1921.
Dr. John Matthai. — Part-time-October 1922 to June 1925.
Mr. T. K. Duraiswami Ayyar. — Officiating-July 1925 to March 1927 (Asst. Professor and Reader, October 1921 to June 1925).
Dr. P. J. Thomas. — June 1927 to June 1946.
Dr. P. S. Lokanathan. — Officiating - April to September 1935 and January 1941 to April 1942).
Dr. R. Balakrishna. — From December 1946.

Readers:

Dr. P. S. Lokanathan. — June 1927 to March 1944. (Appointed Assistant to Professor 1918).
Mr. K. C. Ramakrishnan. — Officiating - January 1941 to April 1942.
Dr. R. Balakrishna. — October 1944 to December 1946.
Dr. R. N. Poduval. — October 1947 to March 1952.
Mr. C. W. B. Zacharias. — April 1952 to March 1954.

Lecturers:

Mr. K. C. Ramakrishnan. — April 1925 to May 1943. (Appointed Assistant to Professor 1921).
Mr. C. W. B. Zacharias. — October 1943 to March 1952.
Dr. D. Bright Singh. — January 1953 to January 1956.

Number of Research Fellows and Students, 1915-1956.

Fellows:

Men - 5
Women - 2 Total 7.

Students:

Men - 87
Women - 21 Total 108.

INDIAN ECONOMICS

Degrees Awarded, 1915-1956.

D. Litt	—	2
Ph. D.	—	6
M. Litt.	—	44

Research publications other than books.

Author: *Dr. Gilbert Slater.*

Memorandum on Maintenance and Improvement of Tinnevelly Cotton. — *Submitted to Director of Agriculture* - 1916.

Memorandum on Agricultural Indebtedness. — *Sent to Sir Harold Stuart*, 1916.

High Prices. — *Published by Publicity Bureau, Madras*, 1920.

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Co-operative Stores in India. — *Chapter for a book on Indian Co-operative Studies edited by R. D. Ewbank*, 1920.

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Stabilizing the Rupee. — *Transactions of the Indian Economic Association*, 1920-21 (*Madras Section*).

Author: *Dr. John Matthai.*

Written Evidence submitted to the Indian Economic Enquiry Committee, 1925.

Author: *Mr. T. K. Duraiswamy Iyer.*

Written Evidence before the Hilton Young Commission.

Indian Financial Statistics. — *Indian Economic Conference.*

Author: *Dr. P. J. Thomas.*

The Present Position of Economic Studies. — *Madras University Journal*, Vol. II, No. 1, 1929,

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A Public Works Programme in the East. — *The Times*, August 4, 1935.

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Financial Prospects of the New Constitution. —*Madras University Journal*, Vol. VIII, No. 1, 1936.

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Author: Dr. P. S. Lokanathan.

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Author: Mr. K. C. Ramakrishnan

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Hill Produce of Madura. —*Journal of the Madras Geographical Association,* Vol. VII.

The Sugar Industry in India.—*Journal of the Madras Geographical Association,* Vol. VIII.

A Model of Intensive Cultivation in the Cauvery Valley.—*Journal of the Madras Geographical Association,* Vol. VIII.

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Author: *Dr. R. Balakrishna.*

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INDIAN ECONOMICS

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Author: *Dr. R. N. Poduval.*

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Author: *Mr. C. W. B. Zacharias.*

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INDIAN ECONOMICS

Author : *Dr. D. Bright Singh.*

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DEPARTMENT OF PHILOSOPHY

The Department was started with the creation of a Readership in 1927 'with the special object of promoting the study of South Indian thought'. Mr. S. S. Suryanarayana Sastri, M. A., B. Sc., (Oxon), Bar-at-Law, appointed first Reader of the Department, assumed charge on 1st September 1927. The Department was at first, housed in "Thambu Villa", Pantheon Road, in convenient proximity to the Connemara Library, the Oriental Manuscripts Library and the Government Records Office. Shifted to Limbdi Gardens, Royapettah, on 1st October 1929, the Department was finally moved to the new University buildings in July, 1936. Started on a temporary basis at first, the Department was made permanent from 1st April 1930.

Delivering the Inaugural Address, on March 13, 1928, Professor Suryanarayana Sastri observed that though there was no gainsaying the fact that South India has been the home of subtle philosophies and great religions ("and it might even be claimed that the best Indian philosophy is South Indian"), the Reader, consequent on the terms of the foundation, must be careful to avoid the extreme of parochialism. "Philosophical conquests have for us no meaning", he said, "except in so far as a less comprehensive theory is included and transcended in a more comprehensive and more harmonious one".

The principle to be followed in research in Indian philosophy may best be expressed in his own words. "Our guiding factor in that study must be the desire to discover and grasp the fundamental principles of the philosophy and the culture it is connected with, a desire which cannot continue in its purity so long as it is affected by considerations of the need for justifying our ways to the outsider or making them appeal to him ...... Our primary and perhaps only justification must therefore be the need to consolidate our own intellectual heritage with a view to understand and regulate better the lives which have been guided by it all these centuries. One has necessarily to consider the influence thereon of foreign elements impinging on it for good or bad; but this is very

different from studying it for the purpose of justifying it to the inheritors of another culture".

During the fifteen years, he was Reader in Indian Philosophy, Professor Suryanarayana Sastri engaged himself in studying and guiding research relating to Advaita, Śivādvaita, Sāṅkhya and Śaiva Siddhānta. In addition to guiding research students in these branches of Indian philosophy, he guided research in Vaiṣṇava Siddhānta also. Though the languages concerned were mainly Sanskrit and Tamil, he guided the work of students who were studying Telugu texts also. Two students, during his Readership, worked on subjects relating to Political Philosophy and obtained their M. Litt. Degree.

Latterly, he delivered lectures on Advaita to students who offered it as a special subject for the B.A. (Hons.) and M.A. Degree Examinations of the Madras University. Professor Sastri was connected with the Indian Philosophical Congress from its inception and was for a term its General Secretary. He presided over sectional meetings at some of its sessions. Professor Sastri delivered the Principal Miller Lectures in 1937 on the Concept of Progress in Advaita. For several years, he was delivering annual courses of lectures pertaining to his researches. The University sustained a great loss by his premature death in December 1942.

In 1943, the Readership was converted into two Senior Lecturerships, one in Indian philosophy and the other in Experimental Psychology. Dr. T. M. P. Mahadevan, M. A., Ph. D., who was Professor and Head of the Department of Philosophy, Pachaiyappa's College, Madras, was appointed Senior Lecturer and Head of the Department on 15th September 1943 in succession to Professor Sastri. Dr. G. D. Boaz was appointed Senior Lecturer in Psychology and he joined duty on 27th October 1943. The Psychology Department functioned as a part of the Philosophy Department till 1948 when it was constituted into a separate Department.

Dr. Mahadevan has chosen Advaita as the main field of his research. He has published his researches on Gauḍapāda's Kārikā on the Māṇḍūkya Upaniṣad and is currently making a special study of Saṁbandha Vārtika. He has been investigating other branches of Indian philosophy also, notably Śaiva Siddhānta. He has been guiding research in the various branches of Indian philosophy as

well as in Western philosophy (One of the students who worked under him got the M. Litt. Degree of the Madras University for his studies on Bradley, and another recently got his M. Litt. for his studies on Hume).

There have been students from other universities—Indian and foreign, working under his guidance. He has delivered lectures on Advaita to Honours and Post-graduate students who offered it as a special subject for their Degree Examinations. He delivers Inter-collegiate lectures on Indian philosophy to the Honours and Post-graduate students of Pachaiyappa's, Vivekananda and Christian Colleges. He delivered the Principal Miller Lectures in 1953 on *'Time and the Timeless'*.

Dr. Mahadevan was, for a year (1948-49), visiting Professor of Indian Philosophy at Cornell, U.S.A. He attended the Conference of Professors of Philosophy convened by the Ministry of Education at New Delhi in September 1951. The Government of India deputed him to attend, as an Observer, the UNESCO Seminar on the Concept of Man held in Delhi (December 1951); deputed him to attend the Pakistan Philosophical Congress in Peshawar (1956), and the Symposium on Buddhism at Delhi in 1956.

Dr. Mahadevan has been connected with the Indian Philosophical Congress from 1933. He has served this All-India body, first as Assistant Secretary, then as Joint Secretary. He is on its Executive Committee. He has presided over Sectional meetings, taken part in Symposia, and was the General President at the Session held in 1955 at Nagpur. He is closely connected with the Tamil Encyclopaedia to which he has contributed several articles. He is the Area Secretary for India, for the Union for the Study of the Great Religions founded by Professor Spalding and Dr. S. Radhakrishnan.

The original Readership kept in abeyance since Professor Śāstri's death was restored when Dr. Mahadevan was promoted Reader with effect from 24th October 1949. He was promoted Professor on 1st July 1953.

The University submitted proposals to the University Grants Commission for the expansion of the Department to embrace the

various systems of philosophy. Sanction of the necessary recurring grant has enabled the University to expand the Department of Indian Philosophy by adding the posts of one Professor and one Lecturer in Philosophy. Dr. V. A. Devasenapathy, M. A., Ph. D., Assistant Professor of Philosophy, Pachaiyappa's College, Madras, was appointed Reader in Philosophy, and he joined the Department on 16th September 1956. He is engaged in a study of *Tiruvācagam* with the available commentaries. He is connected with the Tamil Encyclopaedia to which he has contributed articles.

Mr. P. K. Sundaram, M. A., who was working in the Department as a Research Fellow, was appointed Senior Lecturer. He joined duty on 27th January 1956. He is engaged in a study of the *Iṣṭasiddhi.* His work relating to the word-index of Brahma-Sūtra Bhāṣya of Śaṅkara is nearing completion. He is the Local Secretary of the Madras Branch of the Union for the Study of the Great Religions.

Publications

S. S. Suryanarayana Sastri — *Śivādvaita of Śrīkaṇṭha,* 1930.

S. S. Suryanarayana Sastri (Ed. & Tr.). — *Śivādvaita Nirṇaya,* 1930.

S. S. Suryanarayana Sastri (Ed.). — *Sāṅkhyakārikā of Īśvara Kṛṣṇa,* 1st Edition 1930; 2nd Edition 1936; 3rd Edition 1948.

S. S. Suryanarayana Sastri & Dr. C. Kunhan Raja (Ed. & Tr.). — *Bhāmatī,* 1934.

S. S. Suryanarayana Sastri, & Dr. C. Kunhan Raja (Ed. & Tr.). — *Mānameyodaya,* 1934.

S. S. Suryanarayana Sastri (Tr.). — *The Siddhāntalesa Saṅgraha of Appayya Dīkṣita,* Vol. I, 1935.

S. S. Suryanarayana Sastri (Tr.). — *The Siddhāntalesa Saṅgraha of Appayya Dīkṣita,* Vol. II, 1937.

S. S. Suryanarayana Sastri (Ed.) — *Paramārthasāra,* 1941.

S. S. Suryanarayana Sastri (Ed.). — *The Life and Teaching of Śaṅkara.*

S. S. Suryanarayana Sastri & Sailesvara Sen (Ed.). — *Vivaraṇa-prameya Saṅgraha,* 1942.

S. S. Suryanarayana Sastri (Ed. & Tr.). — *Vedānta Paribhāṣā,* 1942.

Bulletins :—

S. S. Suryanarayana Sastri. — *Sāṅkhyakārikā studied in the light of the Chinese version*, 1933.

S. S. Suryanarayana Sastri & T. M. P. Mahadevan. — *Bhedadhikkāra (a critique of difference)*, 1936.

S. S. Suryanarayana Sastri & E. P. Radhakrishnan. — *Tattvaśuddhi* 1941.

Papers published :—

Author: *Sri S. S. Suryanarayana Sastri.*

The Study of Indian Philosophy. — *Madras University Journal*, Vol. 1, No. 2., 1929.

Truth in Śaiva Siddhānta. — *Madras University Journal*, Vol. 2. No. 1, 1930.

A note on Marks determinative of purport. — *Madras University Journal*, Vol. 2, No. 1, 1930.

Manimekhalai — account of the Sāṅkhya. — *Journal of Indian History*, 1929.

Maṇḍana's discussion of difference. — *Indian Philosophical Congress*, 1931.

Self in relation to knowledge. — *Symposium, Indian Philosophical Congress*, 1931.

Māṭhara and Paramārtha. — *Journal of the Royal Association Society*, London, 1931.

The Chinese Suvarna — Saptati and the Māṭhara-vritti. — *Journal of Oriental Research*, 1931.

Vācaspati's criticism of Sphoṭa-Vāda. — *Journal of Oriental Research*, Vol. VI, No. 4., 1933.

Universal Salvation. — *Symposium published in Indian Philosophical Quarterly*, 1934.

Substance and Attribute in the Śaiva Siddhānta. — *Journal of Oriental Research*, 1935.

Tattvaśuddhi and Subjectivism. — *Indian Historical Quarterly*, September, 1934.

The Advaita Vidyāmukura. — *Contributed to All-India Oriental Conference*, Mysore, 1936.

Śaivism and the Tamil Genius. — *Contributed to All-India Oriental Conference*, Mysore, 1936.

The Brahmādvaita of Maṇḍana Miśra. — *Contributed to All-India Oriental Conference*, Mysore, 1936.

Maṇḍana and Bhāvādvaita. — *Journal of Indian History*, 1937.

Strīprajñā. — *Har Bilas Sarda Volume*, 1937.

The Missing Kārikā in the Sāṅkhyasaptati. — *The Poona Orientalist*, 1937.

Advaita and the Concept of Progress. — *Journal of Oriental Research*, 1937.

The Path to Sainthood. — *Kalyan*, 1937.

The Source of Legal Obligation. — *Indian Philosophical Congress*, 1937.

Paramārthasāra. — *New Indian Antiquary*, Vol. 1. Pt. 1., 1938.

Omniscience. — *Indian Historical Quarterly*, 1938.

An Advaitin's plea for continuity. — *Madras University Journal*, Vol. X, No. 1, 1938.

Jīvanmukti. — *Philosophical Quarterly*, 1939.

On the Nature of Sublation. — *New Indian Antiquary*, 1939.

Akhaṇḍārtha. — *Journal of Oriental Research*, 1939.

The Negative judgement in relation to Reality. — *Indian Philosophical Congress*, 1939.

The Philosophy of War. — *Triveni*, 1939.

The Hero. — *Ross Memorial Volume*, 1940.

Some observations on the Māṇḍūkyakārikā. — *Journal of Oriental Research*, 1940.

The General Will. — *K. V. Rangaswami Iyengar Commemoration Volume*, 1940.

Karma and Fatalism. — *The Philosophical Quarterly*, 1940.

Advaita, Causality and Human Freedom. — *Indian Historical Quarterly*, 1940.

Jñānād eva tu kaivalyam. — *Journal of Oriental Research*, 1941.

Why Philosophy ?. — *C. R. Reddy Sashtiabdapurti Volume*, 1942.

Beauty. — *Journal of Madras University*, Vol. XIII, 1941.

Prayer. — *Journal of Madras University*, Vol. XIV, 1942.

Dr. T. M. P. Mahadevan

List of books published:

1. A critique of Difference or the Bheda-dhikkāra (joint author with Professor S. S. Suryanarayana Sastri), 1936.

2. The Philosophy of Advaita, (with special reference to Bhāratītīrtha-Vidyāraṇya, 1938.
3. The Upanishads (Selections fromthe 108 Upanishads with English translation), 1942.
4. Outlines of Hinduism, 1942.
5. The Fundamentals of Logic, 1943.
6. Whither Civilization and Other Broadcast Talks, 1946.
7. Gauḍapāda — A Study in Early Advaita, First Edition, 1952.
   ———, Second Edition, 1953.
8. Time and the Timeless, (Principal Miller Lectures), 1953.
9. The Idea of God in Śaiva Siddhānta, 1955.
10. Outlines of Hinduism (Revised Edition), 1956.
11. Dhakṣiṇāmūrti Stotra of Śrī Śaṅkara, (Text and translation with notes), 1956.

Papers published:—

1. How can youth contribute to the realization of a Universal Religion, — *New History Society, New York, 1935* (Prize Essay in a World Competition).
2. Can Difference be Perceived? — *Proceedings of the Indian Philosophical Congress,* 1937.
3. Present tendencies in Indian philosophy. — *Vedanta Kesari,* 1937, Madras.
4. The twofold path in the Gītā. — *Proceedings of the Indian Philosophical Congress,* 1938.
5. Is the Gītā a gospel of War ? — *Madras University Journal,* 1941.
6. The concept of religion. — *Sir C. R. Reddi Shashtiabdapurti Volume,* 1942.
7. Some problems of the Māṇḍūkya-kārikā. — *Madras University Journal,* 1944.
8. Soul: one or many. — *Proceedings of the Indian Philosophical Congress,* 1944.
9. Arjuna's argument. — *Vedanta Kesari,* 1944.
10. The Ajātivāda of Gauḍapāda. — *Dr. B. C. Law Volume,* 1945.
11. Gauḍapāda, Ādi Śeṣa and Vasiṣṭha. — *Madras University Journal,* 1945.
12. The philosophy of Yājñavalkya. — *Indian Review,* 1945.
13. Śrī Kṛṣṇa, the Gītā and War. — *Prabuddha Bharata,* 1945.

14. The roots of Advaita in the Rig-veda. — *Dr. C. Kunhan Raja Presentation Volume*, 1946.
15. The Contribution of the Gītāchārya to the cultural unity of India. — *Vedanta Kesari*, 1946.
16. Not this was spoken by the Buddha. — *Madras University Journal*, 1947.
17. Śaivism and the Indus Civilization. — *The Journal of the Ganganatha Jha Institute*, 1947.
18. Discovery of the Soul. — *Prabuddha Bharata*, 1947.
19. Bertrand Russell on Western Philosophy. — *The Indian Review, Madras*, 1948.
20. A French Savant's Advocacy of Vedanta. — *Vedanta Kesari*, 1948.
21. Existentialism. — *The Vedanta Kesari, Madras*, 1948.
22. Swami Vivekananda and the Doctrine of Māyā. — *Golden Jubilee Volume of the Ramakrishna Mutt*, Madras, 1948.
23. The place of Reason and Revelation in the Philosophy of an early Advaitin. — *Proceedings of the Tenth International Congress of Philosophy*, 1948.
24. Philosophy and Philosophers. — *Aryan Path*, 1949.
25. The path of soul evolution. — *Aryan Path*, 1949.
26. Indian Philosophy and the West. — *Proceedings of the Indian Philosophical Congress*, 1949.
27. Western Vedanta. — (in the book, *Vedanta and the West*, Los Angeles, 1950).
28. Western and Eastern Thought. — (in the book, *Goethe and the Modern Age*, Regnery & Co., Chicago), 1950.
29. The Concept of Dharma in the Mahabharata. — *Vedanta Kesari*, 1950.
30. Gandhism, its philosophy and technique. — *Common Cause*, Chicago, 1950.
31. Interpreting Indian Thought to America. — *Indian Review*, 1950.
32. Beyond Ethics. — *Presidential Address to Ethics and Social Philosophy Section, Silver Jubilee Session of the Indian Philosophical Congress*, 1950.
33. Rudra-Śiva. — *Prof. C. S. Srinivasachari Commemoration Volume*, 1950.
34. Śrī Ramaṇa. — Sage of Aruṇāchala. — *Indian Express Magazine*, 1950.

35. Myth and Ritual in Hinduism. — *Madras University Journal*, 1951.
36. The basis of social, ethical, and spiritual values in Indian philosophy. — *Essays in East-West Philosophy*, University of Hawaii Press, Honolulu, 1951.
37. Saundarananda. — *Prabuddha Bharata*, January, 1951.
38. Can there be ethics without metaphysics ? — *Proceedings of the Indian Philosophical Congress*, 1952.
39. Philosophies of India. — *Pacific Affairs*, U.S.A., 1952.
40. Śaivism - contributed to the History and Culture of the Indian People, Volume II. — *Bharatiya Vidya Bhavan*, Bombay, 1951.
41. Sri Ramakrishna, the Prophet of Inwardness, (*Golden Jubilee Souvenir of the Ramakrishna Mission Home of Service*, Banaras, 1952.
42. The Original Gītā. — *Prof. M. Hiriyanna Commemoration Volume*, Mysore, 1952.
43. Chapter on 'The Upaniṣads' and 'Śaiva Siddhānta'. — in *History of Philosophy : Eastern and Western*, sponsored by the Ministry of Education, Government of India, 1952.
44. The spirit of Indian philosophy. — *Osmania University Lecture*, 1952.
45. Death and Deathlessness. — *Prabuddha Bharata*, February, 1952.
46. The Unesco Symposium on the Concept of Man. — *Vedanta Kesari*, 1952.
47. Philosophy in America. — *Vedanta Kesari*, 1952.
48. Thāyumānavar. — *Kalyana Kalpataru*, 1952.
49. The Philosophy of Education. — *Prabuddha Bharata*, 1952.
50. The Philosophy of (i) Nyāya and (ii) Vaiśeṣika — Tamil Encyclopaedia.
51. Tantric Cults.—*Prabuddha Bharata*, 1953.
52. Kashmir Śaivism. — *Bharatiya Vidya Bhavan*, 1952.
53. Approach to Philosophy: Pleasure. — *Prabuddha Bharata*, 1954.
54. Western Civilization and Vedantic Culture. — *Comprendre*, *Venice*, 1953.
55. The Metaphysics of Śaṅkara, *Philosophy*: *East and West*, Hawaii, 1953.
56. Section on Śaivism in the *History and Culture of the Indian People*, Volume III. — *Bharatiya Vidya Bhavan*, 1954.

57. Indian Policy of non-alignment. — *The Indian Year Book of International Affairs,* 1953.
58. Articles in the Second Volume of Tamil Encyclopaedia on European philosophy, Upaniṣads, Materialism — Eastern and Western, etc., 1955.
59. Sections on Śaivism in the *History and Culture of the Indian People,* Volume IV, 1955.
60. Presidential Address entitled 'The Re-discovery of Man', to the *Thirtieth Session of the Indian Philosophical Congress,* Nagpur, 1955.
61. The Philosophy of Tirukkuraḷ, 1956.
62. Indian Culture and the Industrial Age, 1956.
63. Gauḍapāda. — Reply to a review, 1956.
64. Kauṭilya on the Sanctity of Pacts, 1956.

At the invitation of Cornell University, Ithaca, New York, Dr. T. M. P. Mahadevan delivered two series of weekly lectures at Cornell during the Fall and Spring Terms. The first series was on 'The Basic Ideas in Indian Thought'; and the second was on 'Vedānta'. The lectures were sponsored by the Sage School of Philosophy of the University and were attended by both students and faculty. Besides these lectures, he addressed several groups of students at Cornell, in their classes, clubs and fraternities. He also attended some of the classes and seminars in the Departments of Philosophy and Sociology in order to study the teaching methods obtaining in the United States.

The following Universities and Institutions, among others, invited him for public lectures: Columbia University in New York; University of Texas in Austin; University of Pennsylvania in Philadelphia; University of New Mexico in Albuquerque; Well's College in New York; Junior College in Cisco, Texas; International Student House in Washington, D.C.; Town Hall in Los Angeles; World Affairs' Council in San Francisco; several of the Centres of the Ramakrishna Mission; and some Branches of the Hindustan Association.

In December 1948 he attended and took part in the annual meeting of the American Philosophical Association held at the University of Virginia, Charlottesville.

On May 24, 1949, he delivered the Foerster Lecture on the Immortality of the Soul, at the University of California, Berkeley.

The Goethe Bicentennial Foundation invited him to represent India at the Convocation held in July 1949 at Aspen, Colorado. The title of the paper he presented was: "Eastern and Western Thought". Besides many European and American Goethe scholars, Dr. Albert Schweitzer spoke at this Conference. His lecture was presided over by Professor Ernest Hocking of Harvard.

He was invited to take part in the East-West Philosophers' Conference held under the auspices of the University of Hawaii from June 20 to July 29, 1949. Besides conducting a survey course in Indian philosophy and participating in Seminars and discussions, he presented to the Conference a paper entitled 'The Basis of Social, Ethical and Spiritual Values in Indian Philosophy'.

Besides the Universities mentioned above, he visited the following Universities during his journey round the world: University of Ceylon where he addressed a meeting of the Philosophy Association; University of London; Universities of Harvard, Boston, Princeton, Howard, and California at Los Angeles; Chudalankorn University in Bangkok.

Research Students and Fellows

1927. K. Balasubramaniam (Conception of Subrahmaṇya in Tamil and Sanskrit Literature).

1928. C. D. Samuel.

1929. S. Raghavachari.

1932. Miss V. Paranjoti. — *Śaiva Siddhānta*, Ph.D.

1933. T. M. P. Mahadevan. — The *Philosophy of Advaita with special reference to Bhāratītīrtha Vidyāraṇya*, Ph.D.
P. V. Suryanarayana. — *Ethical Realism of Hartmann.*

1934. P. Nagarja Rao. — *Epistemology of Madhva.*
W. Venkatasubramaniam. — *Tattvapradīpikā of Citsukha.*

1935. V. A. Devasenapathy. — *Śivajñāna Siddhiyār*, Ph.D.

1937. John Philip. — *A philosophical enquiry into the nature of freedom, authority and national individuality*, M.Litt.
S. Ramamurti. — *Sītārāmānjaneyamu.*

1938. P. Nagaraja Rao. — Research Fellow — *Vādāvali.*
C. Ramachandraiah. — *Vaiṣṇavism in Telugu literature:* Index to *Brahmasūtra Bhāṣya of Śrī Śaṅkara.*
M. C. Mathew. — *The Philosophy of Bosanquet*, M.Litt.

1939. S. Kalathinathan. — *Tenkalai Vaiṣṇavism with special reference to Śrīvacanabhūṣaṇam,* M.Litt.
1941. T. Mahadevan. — *Saṅkṣepaśārīraka.*
K. Venkatarama Sastri. — *Nyāyacandrikā.*
1943. T. Mahadevan — M.Litt.
M. Srinivasachar — *Śatadūṣaṇī,* Ph.D.
1947. M. Ratna Bai — *A study of Indian Ethics,* M.Litt.
1945. N. Ramachandran. — *The Doctrine of Maya.*
1947. P. N. Shanmugasundaram. — *The Metaphysics of F. H. Bradley,* M. Litt.
1948. V. A. Devasenapathi. — Research Fellow — *Sivajnanasiddhiyar with its six commentaries,* Ph.D.
1947. E. I. Ituthran. — *Nyāyamakaranda,* M.Litt.
1948. A Rajalakshmi. — *The mystic philosophy of Rāmalingam.*
1952. P. V. Sulochana. — *The Indian Conception of Value,* M. Litt.
1953. K. Raghunayakulu. — *A study in logical positivism.*
1952. Mrs. R. Sivakumar alias Florence Manuel, *The Ethics of Saiva Siddhanta,* M. Litt.
A. G. Krishna Warrier. — *The Concept of Mukti in Advaita Vedanta.*
Mrs. Sarasvati Chennakesavan. — Research Fellow, *The Concept of Mind in Indian Philosophy,* Ph.D.
S. Kalyanasundaram. — *The Ethical Philosophy of Mahatma Gandhi,* M. Litt.
S. Ganesamurti. — *A Critical Study of Sceptism,* M.Litt.
Miss C. Madhavi Kutty. — *Post-Sankara Advaita,* M. Litt.
Miss Yeme Bai Madhavan. — *The Doctrine of Supermind in the Philosophy of Sri Aurobindo.*
1954. P. K. Sundaram. — Research Fellow, *Advaita Epistemology.*
1955. S. Gopalan. — *Hindu Social Philosophy.*
B. V. Radhakrishnan. — *Concept of God in Vedanta.*
1956. T. P. Ramachandran. —Research Fellow, *Concept of Vyāvahārika in Advaita Vedānta.*
1956. Ch. Sambasiva Rao.

Foreign Students.

1. Mr. Dale Riepe. — American Fulbright Scholar—made a special study of Indian Philosophical Naturalism.
2. Mr. Solomon Levy. — American Fulbright Scholar, took help in his study of the Principle of Causality.

3. Dr. G. W. Patzig. — recipient of Unesco Fellowship spent a month acquainting himself with the leading concepts of Indian philosophy.
4. Mr. W. H. Harris. — American Fulbright Scholar joined the Department as a casual student and made a study of the works of Ramanuja.
5. Mr. J. F. Staal from Holland joined the Department as a Government of India scholar for a special study of Neoplatonism and Vedanta.

Research Assistants

1. Mr. S. Subrahmanya Sastri, was a Research Assistant in the Department between October 1942 and January 1943.
2. Mr. G. Harihara Sastri was a Research Assistant between 10th October 1950 and 30th April 1953, in connection with the indexing of *Brahma Śūtra Bhāṣya of Srī Śaṅkara.*

Endowments for Lectures and Medals

Principal Miller Lectureship :—

Dewan Bahadur Sir R. Venkatarathnam Naidu, Vice-Chancellor of the Madras University between 1925 and 28 offered to the University on January 13, 1926 which was the commemoration day of the birth of Dr. Miller, Government securities carrying 3½ per cent interest of the face value of Rs. 10,000 to constitute an endowment for a lectureship to be styled "The Principal Miller Lectureship" in honour of his revered teacher, Dr. William Miller, former Principal of the Madras Christian College and for sometime Vice-Chancellor of the Madras University. The Senate at its meeting held on March 18, 1926, accepted his offer. The lecturer selected by the Syndicate should deliver a course of not less than two lectures on a subject dealing with the exposition of "the Inner Meaning of Human History as disclosing the one increasing purpose that runs through the ages".

The Miller Medal :—

This medal was found by the Rev. William Miller, Principal of the Madras Christian College, in memory of his father, the late

William Miller, Esq., of Thurso who took life-long interest in education generally and in his later years a special interest in the education of Southern India. It was accepted by the Senate at its meeting held on October 25, 1883.

The medal is awarded to a candidate who, among the candidates qualifying during the year for the Degree of Bachelor of Arts by passing all the parts at the first appearance and taking a First or Second Class in Part III, Group (iii-a) Philosophy, has obtained the higest number of marks in the group.

The Samuel Satyanadhan Memorial Medal :—

This medal was founded by Mrs. Kamala Satyanadhan, M. A., in memory of her late husband, Mr. Samuel Satyanadhan, M.A., LL.D., Professor of Philosophy in the Presidency College, Madras, and was accepted by the Senate at its meeting held on March 8, 1907. It is awarded to a candidate who, among the candidates qualifying during the year for the Degree of Bachelor of Arts (Honours) in the first or second class, has, in the opinion of the Syndicate, shown distinguished merit in Philosophy, Branch II.

IV

DEPARTMENT OF GEOGRAPHY

The Diploma classes in Geography were instituted in the University in July 1932, when Mr. George Kuriyan was appointed Senior Lecturer with Messrs. N. Subramanyam, (Lecturer in Geography, Teachers' College, Saidapet) and B. M. Thirunaranan to assist him as part-time Assistant Lecturers. In July 1935, Mr. Thirunaranan was appointed full-time Assistant Lecturer and the original part-time arrangement was abolished.

Till July 1938, the main activity of the department continued to be teaching, preparing students for the Diploma examination in Geography; but in 1938, the Senate reconstituted the then existing arrangements, and like the other Departments of the University, made it a Department of Study and Research. Mr. George Kuriyan, the Lecturer in charge of the Diploma Course in Geography was formally appointed as Senior Lecturer and Head of the Department, and Mr. B. M. Thirunaranan, Assistant Lecturer, was appointed as Junior Lecturer.

In 1940, Mr. B. M. Thirunaranan resigned, and the vacancy was filled up by the appointment of Mr. V. Kalyanasundaram, M. A., L. T., Dip. in Geog. Dr. George Kuriyan was promoted as Reader in Geography with effect from 1st April 1948, and he was promoted as Professor of Geography on 24-10-1949.

In July 1948, the University started the B. A., and B. Sc., Hons courses in Geography on a co-operative basis, with the Queen Mary's College, the Vivekananda College and the University Department of Geography as the three participating units. The entire work of coaching these Honours students in the subject is done in the University Department by Dr. George Kuriyan, assisted by the Senior Lecturer and the Teachers in the co-operating colleges, while the coaching in Preliminary English and the Subsidiary subjects is done in the respective colleges. In July 1949, the Presidency College also joined the scheme as the fourth participating unit. Till March 1949, simultaneously with this, the Diploma course was also conducted but since then, it has been suspended, owing to the exceptionally heavy teaching load in the department.

In July 1950, the Vivekananda College was allowed to withdraw from the Inter-collegiate co-operative scheme, as there was no suitable Professor with the requisite qualifications on the staff of the college. The Honours teaching is now being done jointly by the Queen Mary's College, the Presidency College and the University Department of Geography as the three participating units.

In 1950, Mr. V. Kalyanasundaram resigned and Dr. V. L. S. Prakasa Rao, M. A., D. Phil., was appointed as Senior Lecturer in 1951.

There are about fifty students in the Department. On an average, every year 16 under-graduate students for Honours classes and four post-graduate students are admitted. So far, 56 candidates have passed their Honours degree, and 12 candidates their M. A. degree.

Mr. K. Ramamurthy, M. A., worked in the Department as a Research Student, and he was awarded the M. Litt. Degree for his thesis on "Some Aspects of the Regional Geography of Tamilnad." Miss. V. A. Janaki worked in the Department as a Research Student from 1946-48 on the "Agricultural Geography of South India." In 1948, she resigned her studentship, and proceeded to Oxford where her thesis on a similar topic got her, the B. Litt. Degree.

Each Final Honours and Post-Graduate student submits a dissertation on a selected topic and a report on the socio-geographic survey of a selected village. So far about 100 villages have been surveyed by the students.

As a part of the Departmental programme of research work both the Professor and the Senior Lecturer are conducting research on the Economic and Regional Geography of India, and several papers have already been published, some of which are mentioned in the attached Appendix. Intensive field work is also being carried out in typical localities. Besides, the Department conducts a major excursion every year taking a batch of Honours students for a regional geographical study.

Dr. George Kuriyan was the President of the Geography and Geology Section of the Indian Science Congress in 1942. He was the Secretary of the Indian Geographical Society and Editor of the Indian Geographical Journal from 1942-48 and has been the President of the Society since 1954. He has been one of the seven Vice-

Presidents of the International Geographical Union, representing the countries of Asia for two successive four-year terms, from 1948 to 1956. He has been and is a member of the International Social Sciences Council, UNESCO, from 1952 onwards. Under the Fulbright Smith-Mundt programme he was a Visiting Professor at the University of Pennsylvania, Philadelphia (USA), during 1952-53. He was also a Visiting Lecturer to the Universities of Oxford, London, Nottingham and Zurich in 1954. He worked as a Research Consultant for the American Geographical Society from June to October 1954.

Dr. V. L. S. Prakasa Rao is the Honorary Secretary of the Indian Geographical Society and Editor of the Indian Geographical Journal, since 1952. He is also the Editor, Telugu Encyclopaedia-Geography Section since 1952.

Appendix

Dr. George Kuriyan:

1. Hydro-Electric Power in India — *A Geographical Analysis, Monograph-Indian Geographical Society,* 1943, Reprinted 1948.
2. Population and its Distribution in Kerala, *J.M.G.A.*, Vol. XI, pp. 42-46, Vol. XII, pp. 125-146.
3. Industrial Crops of Kerala — *J.M.G.A.*, Vol. XI, pp. 283-290. and Vol. XII, pp. 1-8.
4. Sugar-cane Cultivation in India, — *J.M.G.A.*, Vol. XV, pp. 43-58, and 201-213.
5. Distribution of Population in the City of Madras.— *I.G.J.*, Vol. XVI, pp. 58-79.
6. Geographic Basis of the Legendary Origin of Kerala, — *I.G.J.*, Vol. XVI, pp. 340-354.
7. India — A Study in Space Relations — *I.G.J.*, Vol. XVII, pp. 200-215.
8. Rice in India — *I.G.J.*, Vol. XX, pp. 28-36, 76-84, 110-125, & 155-167.
9. Irrigation in India — *Journal of the Madras University,* Vol. XV, pp. 46-58 and 161-185.
10. Growth of the City of Madras — *Madras Tercentenary Commemmoration Volume,* 1939, pp. 295-315.

11. Hydro-Electric Power Development in South India — *B.C. Law Commemmoration Volume,* Part II, pp. 266-274.
12. Role of Geography in the Planned Development in India — *National Engineer,* May, 1947, pp. 7-11.
13. Some Aspects of the Regional Geography of Kerala — Presidential Address to the Geography and Geology Section of the Indian Science Congress, 1948. *I.G.J.*, Vol. XVII, pp. 1-42.
14. Urban Centres in Kerala — *Journal of the Madras University,* Vol. XI, pp. 90-111.
15. Geography—the Foundations of History — *Journal of the Madras University, Humanities Section,* Vol. 18, No. 2 and Vol. 19, No. 1.
16. A Scheme for the Land Utilisation Map of India — *I.G.J.*, Vol. XXII, pp. 62-64.
17. Food Problem in India — *Silver Jubilee Volume of the Indian Geographical Society,* Vol. XXVI, pp. 203-216.
18. India's Population Problem — *Focus,* Vol. 5. *American Geographical Society,* 1954.
19. Geography in the United States — *I.G.J.*, Vol. XXVIII, pp. 44-52.
20. Report on the Trans-Continental Excursion — *I.G.J.*, Vol. XXVIII, pp. 63-68.
21. Andhra Desa-Its Regional Setting (with Dr. V. L. S. Prakasa Rao, Senior Lecturer, Department of Geography, Madras University),— *Silver Jubilee Number of the Andhra Chamber of Commerce,* 1953, pp. 53-59.
22. India's Population and Resources — *Nature,* June 20, 1954, p. 1218.
23. A Chapter on India, Pakistan and Ceylon — in World Political Geography, edited by Dr. G. Etzel Pearcy.
24. Population and Food Supply in the Union of India — South Asian Issue of the Geographical Rundschau, George Westermann Verlag, Braunchweig, Western Germany.
25. Location of Regional Capitals with special reference to Andhra Desa (with Dr. V. L. S. Prakasa Rao, Senior Lecturer, Department of Geography, Madras University) — *I.S.C.*, Hyderabad, 1954.
26. Power Development in India—*Geographer,* Muslim University, Aligarh.

27. A Note on the United Nations Seminar on Population in Asia and the Far East, held at Bandung, December 1955 — *I.G.J.*, Vol. XXX, pp. 105-108.
28. Agricultural Planning in India — *Current History*, Philadelphia, U.S.A., 1955, and *I.G.J.*, Vol. XXXI, pp. 26-38.

Joint work of Dr. George Kuriyan with the Students in the Dept.

1. The Geographic Basis of the Iron and Steel Industry in India. — *J.M.G.A.*, Vol. VIII, pp. 233-263.
2. A Geographic Study of Manganese with special reference to India.—*J.M.G.A.*, Vol. XI, pp. 235-256.
3. A Geographical Study of the Vellar Basin.— *J.M.G.A.*, Vol. XI, pp. 213-234.
4. Human Geography of the Amaravathi Basin.— *J.M.G.A.*, Vol. XI, pp. 27-41.
5. Tamraparani Basin.— *J.M.G.A.*, Vol. XIII, pp. 161-167.
6. Negapatam—A Seaport Town.— *J.M.G.A.*, Vol., XI, pp. 291-318.
7. Conjeevaram—A Temple Town.— *J.M.G.A.*, Vol. XII, pp. 205-226.
8. Human Geography of Mangalore.— *J.M.G.A.*, Vol. XIII, pp. 373-394.
9. Trade of the Madras Port.— *J.M.G.A.*, Vol. XIII, pp. 395-420.
10. The Coconut and its cultivation on the Malabar Coast.— *I.G.J.*, Vol. XVIII, pp. 79-85.
11. The Chattisgarh Plain.— *Calcutta Geographical Review*, 1940.
12. The Environment of the Tanjore Ryot in relation to Agriculture.— *I.G.J.*, Vol. XVII, pp. 237-254.
13. The Rainfall of Vellore.— *I.G.J.*, Vol. XVIII, pp. 197-203.

Sri. V. Kalyanasundaram:

1. Physical Aspects of Geology of the Chittor District.— *I.G.J.*, Vol. XVI, pp. 398-410.
2. Changes in Sea Level in the South East Coast of Madras.— *I.G.J.*, Vol. XVIII, pp. 30-36.
3. Physical Geography of the North Arcot District.— *I.G.J.*, Vol. 18, pp. 204-212.
4. Future of Salem Iron Ores.— *Journal of the Madras University*, Vol. XVII, pp. 55-65.

5. Evolution of the Coastline of India.—*Madras University Journal*, Vol. XVI, pp. 75-95.
6. Physical Geography of the South Arcot District.—*I.G.J.*, Vol. XIX, pp. 107-115.

Sri. B. M. Thirunaranan:

1. Study of Soils.—*J.M.G.A.*, Vol. XI, pp. 17-26.
2. Progress of Research on Indian Soils.—*Presidency College Geological Magazine*, 1939.
3. Rivers of the Palar Basin.—*J.M.G.A.*, Vol. XIII, pp. 147-160.
4. Site and Situation of Madras.—*Madras Tercentenary Volume*, 1939, pp. 325-330.
5. Geographical Limits of Tamilnad.—*I.S.C.*, 1938.
6. Traditional Limits of Tamilnad —*I.S.C.*, 1939.
7. Geography from a Railway view-point.—*J.M.G.A.*, Vol. XIV. pp. 178-187.
8. Regional Centres of Tamilnad.—*I.S.C.*, 1940.
9. Floods in 1937 in the Tamil Region.—*I.S.C.*, 1939.

Dr. V. L. S. Prakasarao:

1. Techniques of Area Analysis and classification in Agricultural Areas.—*Geographical Review of India*, June 1954, pp. 32-47.
2. Rational Grouping of the Districts of Madras State.—*I.G.J.*, Vol. XXVIII, pp. 33-43.
3. Relative Relief and Wasteland in the Naravagedda Basin.—*I.S.C.*, Lucknow, 1953.
4. Location of Capitals with special reference to Andhra.—(Jointly with Dr. George Kuriyan).—*I.S.C.*, Hyderabad, 1954.
5. Land Use Survey in India—Its Scope and Some Problems.—*International Geographical Seminar*, Aligarh, 1956.
6. Andhra Desa—Its Regional Setting (Jointly with Dr. George Kuriyan).—*Silver Jubilee Number of the Andhra Chamber of Commerce*, 1953, pp. 53-59.

J.M.G.A.—Journal of the Madras Geographical Association.
I.G.J.—Indian Geographical Journal, formerly Journal of the Madras Geographical Association.
I.S.C.—Proceedings of the Indian Science Congress.

V

DEPARTMENT OF INDIAN MUSIC

Staff: *Reader* :—

Sri P. Sambamoorthy, B.A., B.L.

Assistants :—

Sri Kalidass N. Nilakanta Aiyar (Vocal).
Sri M. Udayavarmarajah (Veena).
Sri Madura S. Subrahmanya Aiyar (Violin).

The Department of Indian Music was started in the year 1932 with the object of imparting instruction in the course leading to the Diploma in Indian Music. This course was of one year's duration. Three teachers were appointed to teach vocal, veena and violin respectively. Two special lecturers were appointed to lecture on the portions relating to the Theory and History of Indian Music.

The need for a more intensive course was gradually felt. A special committee was constituted to prepare the scheme and syllabus for a two year Diploma course in Indian Music. The recommendations of this committee were approved and the two year Diploma course was started in August 1937. Simultaneously the Department of Indian Music was reorganised into a Teaching and Research Department with a Senior Lecturer as its Head. The Senior Lecturer, besides carrying on Research and supervising the work of the Research students was entrusted with the task of lecturing to the Diploma students on the portions relating to the Theory and history of Indian Music. Three assistants to teach vocal, veena and violin were also appointed.

Publications

Books published by *Mr. P. Sambamoorthy,* Head of the Department of Indian Music.

1. Tyagaraja's Telugu opera *"Nowka Charitram"* with the songs in notation.

2. Kirtana Sagaram: Book IV.
3. The Teaching of Music.
4. The Flute (Second Edition).
5. South Indian Music—Book III (third edition).
6. South Indian Music—Book IV (second edition).
7. Great Composers—Book I.
8. Great Composers—Book II—Tyagaraja.
9. South Indian Music—Book V.
10. Musical compositions of Cheyyur Chengalvaraya Sastri including his opera: *Sundaresa Vilasam.*
11. *Pallaki Seva Prabandham*—a Telugu opera by Shahji Maharajah 17th century.
12. Dictionary of South Indian Music and Musicians.
13. *Bharata Siddhantam*—edited for the Government Oriental Munuscripts Library, Madras.
14. Second edition of the Descriptive Catalogue of Musical Instruments in the Madras Government Museum.
15. Contributed two chapters on Music and Dancing to the volume —*Cultural History of India* sponsored by the Union Ministry of Education.
16. The work *"Ragas of Karnatic Music"* by Mr. N. S. Ramachandran, a former Research student was published as a Bulletin of the Department in 1938.

Musical Instruments Devised

1. *Graha Bheda Pradarsini* (Mode-Shift-Tone)

This instrument helps one to easily understand the ragas that are derived by the process of modal shift of tonic from a basic raga. The results can be verified visually and aurally.

2. *Grama Murchhana Pradarsini*

This instrument helps one to understand the scheme of murchhanas and gramas of ancient music and the significance of Bharata's experiment relating to Dhruva veena and Chala veena.

3. *Pradarsana Veena:*

It is a Samashti vadya. It is both a concert instrument and a demonstration instrument. The subtleties of the tone system of

Indian Music can be visually and aurally comprehended through this instrument.

Conferences

1. Attended the sessions of the All India Oriental Conference as a Delegate of the University from the year 1937, and contributed papers to the section of Fine Arts.
2. Presided over the Tevaram Pan Research Conference for seven years.
3. Presided over the first Natyakala Conference held in Madras.
4. Led a Musical Delegation appointed by the Government of India to participate in the South-east Asian regional Music Conference in Manila, Philippines, in August 1955.
5. Presided over the Silver Jubilee Music Conference of the Indian Fine Arts Society, Madras.

Contributions To Musicology

1. Enunciation of the scheme 5148 Suddha-Misra Melas.
2. Many new topics pertaining to Musicology.
3. An analytical study of the musical stone pillars in South Indian Temples.
4. Kudimiyamalai Music Inscription—a new interpretation.

Contributions To Musical Repertoire

The musical composition, *Murchhanakaraka mela Ragamalika.*

It is a lakshana Prabandha and gives in extenso in the sahitya, all the sampurna ragas that are obtained from the 72 melakartas through the process of modal shift of tonic.

A Kriti in Haridasapriya raga, a derivative of one of the misra melas and a Kriti in Bhairavi raga.

Manuscripts Studied

1. The Walajapet Music manuscripts.
2. Pallavi Seshayyar's manuscripts pertaining to Ragas and his compositions.

3. Chengalvaraya Sastri's manuscripts.
4. Manuscripts containing the musical compositions of Minor composers in notation.
5. Muthuswamy Dikshitar's manuscripts relating to Jātiswara. Sahityas.

Miscellaneous.

1. Member representing India on the International Music Council of the UNESCO, Paris, France.
2. Member of the International Society for Music Education.
3. Member of the Braille Music Notation Committee constituted by the Government of India for evolving a common Braille Music notation for Indian Music.
4. Member of the Central Advisory Board for music constituted by the Ministry of Information & Broadcasting, Government of India.
5. Member of the All-India Committee constituted by the Sangita Natak Akadami, Delhi, for evolving a common music notation for the whole of India.
6. A number of papers pertaining to the results of research have been contributed to the various Journals and Conferences.
7. Participated in the various symposia pertaining to music and drama organised by the All India Radio and Sangit, Natak Akadami, New Delhi.
8. Guided the work of the research students and research fellows. So far 15 students have been awarded the M.Litt. Degree for their Theses and one research Fellow the Ph.D. Degree.

VI

DEPARTMENT OF POLITICS AND PUBLIC ADMINISTRATION

On a resolution of the Senate, passed in October 1934, recommending the establishment of a school of Politics and Public Administration the Syndicate referred the proposal to the Board of Studies in History and Politics. The Board set up a sub-committee and after receiving and considering its report recommended to the Syndicate that a school or department of Politics may be opened in the University with one Reader and that department might conduct a Diploma Course with the assistance of the departments of Indian History and Indian Economics. This proposal was further considered at a joint meeting of the Boards of Studies in History and Economics in July 1936 and the final scheme was prepared by which a department of Politics and Public Administration was to be created with one Reader as a teaching department of the university with some of the teaching in the department to be undertaken by the university departments of Indian History and of Indian Economics and the Law College, and with occasional or special courses of lectures by experienced government officials and businessmen. The course for the Diploma was to consist of seven subjects: i) Politics, ii) Public Administration—Principles and Practice, iii) History of Administration in India and the Machinery of Government, Central, Provincial and Local, iv) Economics, v) Public Finance, vi) An optional subject in Law.—Law of Contract, I.P.C., Land Tenures, or Indian Constitutional Law, and vii) Another optional subject from Commerce, Business Organisation or Accounts and Cost Accounting. There were to be seven papers in the examination, one for each subject, and the course was to be a part-time course for two years to which admission may be given to candidates who have passed the Intermediate examination. The Syndicate approved of the scheme and calculated the cost of the department at an annual minimum of Rs. 8,000 and a possible annual maximum of Rs. 12,000. Substantially the position thus arrived at was made effective on 14th September 1937 when Dr. Eddy Asirvatham was appointed Reader and the department was inaugurated. Diploma classes were started in 1937. In 1938 Research students were first taken. In 1939 began an arrangement by which the Reader

taught students of Presidency College (Honours and Post-graduate) which lasted till 1952. As a single-teacher department with an annual net cost never exceeding Rs. 10,000 the department teaches on an average thirty pupils in the diploma classes and has on its rolls about four research students in any year of whom one or two may be stipendiaries. During the 19 years that have elapsed since its establishment the size and scope of the department have remained constant. Dr. Asirvatham, the first Reader went on leave in 1945 (July) to the U.S.A. and for two years Mr. V. R. Ramachandra Dikshitar was Honorary Reader in Charge in addition to his duties in the department of Indian History and Archaeology. Two part-time lecturers were appointed in addition to the regular complement of two part-time lecturers, one in Law and the other in Commerce. Dr. William H. Edwards was appointed visiting Professor from September 30, 1946 and he left at the end of the Academic year in March 1947. Dr. Asirvatham resigned in July 1947. Professor Ramachandra Dikshitar continued in charge of the Department till September 15, 1947 when Mr. R. Bhaskaran joined as Reader. Two part-time lecturers continued for Law and Commerce till July 1952 when the lecturing in Law was taken up by Professor C. H. Alexandrowicz, Head of the Department of International and Constitutional Law.

An Honours Course in Political Science (Branch V) was mooted at the meeting of the Academic Council in February 1935 and designed by the Board of Studies, and approved in August 1936. Presidency College was and is the only College offering this course and the first batch of candidates taking this Degree appeared for the final examination in 1945. A Pass course in Political Science was instituted in 1939. Pachaiyappa's College offered the course for a brief period in 1942-44. Presidency College asked for affiliation in B.A. Political Science in 1951, but Government did not sanction the starting of the course. About sixteen candidates take the B.A. Hons. or M.A. Degree in Political Science every year and the graduates in the subject commencing from 1945 number more than 200. There are only four teaching places in the State where a Degree in the subject is required. It is expected that more Political Science may come to be taught in the new three-year Degree course to be inaugurated in 1957.

The Diploma course was reorganised in 1948-49 and new syllabuses were framed and brought into force in 1951.

POLITICS

Appendices give i) Statistics of enrolment and performance at the examinations of the Diploma Course, ii) Particulars of Research Students, Fellows and Research Degrees awarded, iii) Subjects investigated.

I

DIPLOMA COURSE IN POLITICS AND PUBLIC ADMINISTRATION

Year	Strength	Appeared	RESULTS Passed	Percentage
1938 ..	48			
1939 ..	50	23	17	73·9
1940 ..	45	12	6	50
1941 ..	29	12	5	41·7
1942 ..	18			
1943 ..	20	8	7	87½
1944 ..	23	5	4	80
1945 ..	12	3	3	100
1946 ..	25	5	4	80
1947 ..	21	4	2	50
1948 ..	48	6	4	66⅔
1949 ..	11	9	7	78%
1950 ..	54	18	12	66⅔
1951 ..	34	10	8	80%
1952 ..	26	8	6	75
1953 ..	37	7	5	71
1954 ..	44	10	8	80
1955 ..	45	12	10	80

II

RESEARCH STUDENTS

Year	No. of Research Students	No. of Research Fellow.	Degree Awarded.
1938	.. 2		
1939	.. 3		
1940	.. 11		
1941	.. 12		1 M.Litt.
1942	.. 4		1 Do.
1943	.. 11	1 (Chinese student)	1 Do.
1944	.. 4		1 Do.
1945	.. 5		
1946	.. 2		1 Do.
1947	.. 4	1	
1948	.. 7	1	
1949	.. 5		
1950	.. 4		1 Ph.D.
1951	.. 2		
1952	.. 4	1	1 M.Litt.
1953	.. 5		1 Do.
1954	.. 3		
1955	.. 3	1	1 Do.

III

SUBJECTS INVESTIGATED
1938 to 1956

The Indian Civil Service.
Social Legislation in India.
Administration of the Madras Presidency.

POLITICS

The State and Church in Modern Times.
City Government with special reference to India.
Political Theory.
Municipal Administration in the Madras Presidency.
Provincial and Subordinate Civil Services.
Jail Administration in the Madras Presidency.
District Administration in the Madras Presidency.
Judicial Administration in India.
Laws and Law-making in India in the 19th Century.
Indians abroad.
Theories of Representation with special reference to India.
Public Administration.
Federal Finance.
Village Government in the Madras Presidency.
Educational Administration and Policy of British Government in the Madras Presidency.
The Land Revenue Administration of Madras Presidency.
Police Administration of the Madras Presidency.
The Problem of Minorities with special reference to India.
Social Legislation in the Madras Presidency.
The Provincial Governor in India in the 20th century.
The Financial system of South Indian States.
District Administration in India.
The Administration of the District Municipalities under Dyarchy.
Judicial Administration in Madras to 1861.
City Improvement Trusts.
Public Health Administration in the Madras Presidency.
Constitutional and Administrative Development in India.
Indian Government.
The Administration of District Boards in the Madras Presidency 1885-1945.
The pluralist pattern in Indian Political traditions.
Aspects of Revenue Administration in Madras.
Village autonomy and Villagism.
Hindu Political texts before Kautilya.
Hindu Political ideas after Kautilya.
The Indian Constitution to-day.
Development of recent theories of political power.
Elements of Politics.
Liberty and function in Modern Democratic State.
The History of the Madras Secretariat.

Hindu Political ideas of the Middle Ages.
Public Personnel Administration in the Madras State.
Unions and Associations of Government Employees in Madras.
Jail Administration in Madras.
Social Welfare Administration in the State.
The Principle of Non-Violence in Indian Politics.
Hisory of the Madras Legislature.
Hindu Political ideas of the later middle ages.
Amendment of the Indian Constitution.
Political trends as reflected in Tamil periodicals.
Budget Administration in India.
Origin and growth of Political Parties in Madras.
Rural Local Government in India since 1947.
Social and Political ideas of Tamil writers.
Development of the Indian Constitution since 1950.
Documents on the Indian Constitution.
Public Service Commissions in India.
Public Works Administration in Madras.
Financial Administration of the Corporation of Madras.
A History of the Indian Council of State.
Legislation in Madras.
Judicial Decisions and Constitutional Amendments in India.
Prison Administration in Madras.
Puranic material bearing on Indian Politics and Sociology.
State Union Relations in India.

DEPARTMENT OF PSYCHOLOGY

With the initiative of the Vice-Chancellor Sir Dr. A. Lakshmanaswami Mudaliar, the University decided in the year 1943 to institute an Advanced course in Education leading to the M. Ed. Degree, the four Teachers Training Colleges in the city and the University participating. The University agreed to offer the required instruction and laboratory training in Advanced Educational Psychology, theory and practical. To meet this immediate requirement, Dr. G. D. Boaz, M.A., D. Phil. (Oxon), was appointed Senior Lecturer in Psychology in the Philosophy Department. He joined the Department on 27-9-1943. Subsequently, the Psychology Department was upgraded into a separate department with the Senior Lecturer as the Head. On 1-4-1948 he was promoted as a Reader and on 1-4-1952 as Professor.

During the later half of the year 1949, from July to the end of November 1949, Dr. G. D. Boaz was on leave touring in the U.S.A. on a Fellowship from the United Nations observing Psychological clinics, Psychology Departments of various Universities, special schools for handicapped children, etc. Dr. Miss. J. F. Forrester conducted the M.Ed. classes in the absence of Dr. Boaz.

In 1950, the strength of the Department was increased by the appointment of Mr. T. E. Shanmugam, M.A., M.Litt., as the Senior Lecturer, who joined the department on the 13th October 1950. In November, 1956, he was awarded the Ph.D. Degree by the University of Madras.

In the year 1950, the University also decided to institute the Honours course in Psychology, with the Presidency College, Madras, and the Madras Christian College, Tambaram, and the University Department of Psychology as the co-operating units.

The Department now provides training and instruction in two subjects for the Honours course and in Advanced Educational Psychology for the M.Ed. Degree course. The M.Ed. students have to submit a thesis as partial requirement for their examination. Those who take psychological topics for their theses are given guidance and supervision by the staff of the department.

The Department also has its regular quota of Departmental Research students, ranging from two to four new admissions every year.

During the last five years, the Department has also been undertaking research on behalf of the Government of India on various problems. At present four research assistants are working on three different problems.

So far five departmental research students have been awarded M.Litt. Degree on the basis of their work done in the department.

The M.Ed. theses of 21 students supervised in the department have also been approved and accepted so far.

DETAILS OF RESEARCH WORK

I. *Accepted M.Litt. Theses:*

1. Studies in Children's Drawings.—*Miss A. K. Meenakshi* (1946).
2. An Analytical Study of Juvenile Delinquents and Adult Criminals. — *T. E. Shanmugam.*
3. Problems of Mental Hygiene in Schools. — *Miss Irene Manuel* (1950).
4. A Study of some inmates of the Madras Vigilance and Rescue Homes with special reference to their personality structure — *Miss A. K. Srimathi* (1954).
5. A Study of Marriage rituals in some South Indian Communities — *Miss V. C. Vimala* (1956).

II. *Accepted report of work done by the research students in the Dept.*

1. A Comparative Study of Day Scholars and Resident Pupils with reference to their achievement and personality development.— *H. D. Souza.*
2. A Critical Study on the concept of Intelligence.— *Dr. A. S. Narayana Pillai.*
3. An Analytical Basis of Personality and projective studies and Behaviour — *Dr. E. I. George.*
4. Negative phase in the development of personality.— *T. E. Shanmugam.*
5. Language Development of Children between ages 7 and 12 — *Mr. Ramachandran.*
6. Wit and Humour in Malayalam Literature.— *Mr. Verghese.*

7. Reasoning in Schizophrenics.—*Mr. K. A. Sumitran.*
8. Attitude of parents towards bringing up children.—*Mrs. R. S. Patel.*
9. Social Behaviour in Children.— *Miss Mary K, Oommen.*
10. Mother-Child Relationship- A cross-cultural-study.— *Miss J. Dumas.*
11. Problems relating to Adolescence.— *Miss Bedford.*

III. *M.Ed. Theses:*

1. Religious instruction in a National System of Education.
2. An Enquiry into the vacational sense of an un-selected group of S.S.L.C. Students.
3. A Study of Juvenile delinquency in the city of Madras and in the district of Chinglepat.
4. Friendship amongst High School boys, basis of formation and rejection.
5. Man concept test as an Intelligence Test.
6. A Study of Musical ability in High School children.
7. Study of some Personality traits in residential and non-residential students.
8. A Study of Emotional stability in High School boys in South Travancore.
9. A study of development in imagination in children between ages 8 and 11.
10. The Problem of the Bright Child.
11. A study of reading interest in English medium schools in Madras City.
12. Backwardness in some Madras schools.
13. Attitude of non-professional married women graduates to their University Education.
14. Some Personality Problems of Deaf and Dumb children.
15. An enquiry into the backwards in achievement of some pupils in Ceylon schools.
16. A study of character and social development who are deviated in age.
17. A Study of Problem and Order and Discipline in some schools in the city of Madras.
18. Studies in suggestibility with reference to intelligence and sex differences.
19. Emotional Factors in the Reasoning of children.
20. The Man Drawing Test as a measure of intelligence adapted and standardised for use in the primary schools of Travancore.

IV. *Government of India Projects:*

Completed:

1. The Reactions of Socially Backward People to various Ameliorative Measures.

In Progress:

2. A Study on the Probation system in Madras State.
3. A Study of the Adult and Social Education in the Community Development Projects.
4. Standardisation of Intelligence Tests.

Research work done and papers published by
Mr. T. E. Shanmugam, M.A., M.Litt., Senior Lecturer

1. An Analytical Study of Delinquents.—*Indian Journal of Social Work*, (1948), Vol. IX, 176-184.
2. A Study of Adolescent Phantasy — *Journal of the Madras University, A* (1950), July, 44-68.
3. The Verbal Projection Test Stories and TAT Stories — *Journal of the Madras University* (A) Vol. XXII, 1951, 106-118.
4. Characteristics of Adolescent Girls' Phantasies — *Journal of Madras University,* (B) Vol. XXII, 1952, 119-128.
5. A Study of Emotional Instability in Adolescence — *Journal of the Madras University* (A) Vol. XXIV, (1953), 30-40.
6. A Personality Inventory — Its Reliability and Validity — *Journal of the Madras University,* (B), Vol. XXIII, 1953, 252-258.
7. The Thematic Apperception Test and Cultural Factors — (in collaboration with Dr. G. D. Boaz, M.A., D.Phil. (Oxon), Professor of Psychology) — *Awaiting publication.*
8. A Report of the Analysis of Responses to the Personality Inventory of Boys from low Socio-Economic Families (1954), *Journal of the Madras University,* (B), Vol. XXIV, 372-384.
10. The Verbal Projection Test and the Estimates of Teachers and Parents (1955) — *Journal of the Madras University,* (B), Vol. XXV, 271-283.
11. Symptoms of Emotional Instability in Adolescent Boys of low Socio-Economic Families (1956), *Journal of the Madras University,* (A), Vol. XXVII, 81-114.
12. Sex Delinquency and Emotional Instability (1956), *Indian Journal of Social Work,* Vol. XVII, 30-43.
13. The Verbal Projection Test Stories of Delinquent and Non-Delinquent Boys — *Psychological Studies,* I, (1956), 40-50.

DEPARTMENT OF ANTHROPOLOGY

Part I.

The Department of Anthropology began functioning in October 1954 with Mr. M. D. Raghavan as Senior Lecturer and Head. He was relieved of his appointment on July 1946 to take up an appointment under the Government of Ceylon. During this period Mr. Raghavan submitted proposals for the development of this department to the University authorities. Mr. L. A. Krishna Iyer, M.A., was appointed as Senior Lecturer and Head of the Department of Anthropology on 4-1-1947, and continued till 1-7-1949. The Certificate and Diploma courses in Anthropology were commenced on the 2nd July 1947 by Mr. L. A. Krishna Iyer, who was assisted by Professor A. Ananthanarayana Ayyar, Director, Department of Anatomy, Stanley Medical College, Madras, with 12 lectures on "Elements of Human Anatomy and Comparative Anatomy of Man and Anthropoid Apes" and by Dr. A. Aiyappan, Superintendent, Government Museum, Madras, on "Practical work with introductory talks covering Pre-Historic Archaeology and Primitive Material Culture".

Mr. Krishna Iyer delivered six departmental lectures in January 1948 on the "Importance of a study of Anthropology" and five lectures on "The Pre-Dravidian element in Kerala". He also read a paper on "The Aboriginal problem in India" at the Indian Science Congress, 1948, as a delegate of this University.

The following books and papers were published by Mr. L. A. Krishna Iyer during the years 1947-1949.

1. Caste in Kerala, *New Review*, 1947;
2. The Nayars, *Madras University Journal* (in the press on 1947);
3. The pre-historic Archaeology of Kerala (in the press on 1947);
4. Importance of a study of Anthropology, *New Review*, 1948.

5. Primitive Religion, *New Review*, 1948.
6. Kerala, past and present, *New Review*, 1948.
7. The prehistoric Archaeology of Kerala, *New Review*, 1948.
8. Coorg Tribes and Castes, *New Review*, 1948

Part II

Dr. U. R. Baron Ehrenfels, Ph.D. (Vienna), was appointed on 2nd July 1949 as Senior Lecturer and Head of the Department of Anthropology and on March 1956 was promoted as Reader and Head of the Department. He continued the Certificate and Diploma Courses in Anthropology and was in this also assisted by Professor A. Ananthanarayana Ayyar, Director, Department of Anatomy, Stanley Medical College, Madras, with 12 lectures on "Elements of Human Anatomy and Comparative Anatomy of Man and Anthropoid Apes" and 12 lectures by Dr. A. Aiyappan, Superintendent, Government Museum, on: "Practical work with introductory talks covering Pre-Historic Archaeology and Primitive Material Culture", each year.

The Sarat Chandra Roy Gold Medal of 1949 for Social Anthropology has been awarded to Dr. U. R . Ehrenfels, Ph. D. (Vienna), Head of the Department of Anthropology, University of Madras, in February 1950 for original contributions to Social and Cultural Anthropology in India.

The Wenner Foundation for Anthropological Research, Inc., N.Y., U.S.A., (Formerly Viking Fund), awarded two grants-in-aid to Dr. Ehrenfels in 1949-1950 & 1951-1953 for research for the comparative study of Matrilineal Civilizations in India. With the permission of the University authorities, Dr. Ehrenfels carried out five field-trips to the matrilineal Khasi, Garo and Lyngngam's of Assam and two to Kerala during this period.

Following the proposals of Dr. Ehrenfels during this period and with the recommendation of the Board of Studies in Anthropology, this University resolved that with a pass or honours degree in any subject and after passing the Diploma in Anthropology of this University, one can do research in the Department as Stipendiary and Non-Stipendiary student and also proceed to a higher research degree in Anthropology. Research facilities to the students for higher studies in Anthropology have been at first offered in 1950 by the Madras University.

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Part II — (A) General

A course of six Departmental Lectures was delivered by Dr. U. R. Ehrenfels in November-December 1949 on "Culture-patterns and Environment".

In 1949-50 a research paper was submitted by Dr. Ehrenfels to the Asian Seminar on "Rural Adult Education in colloboration with the UNESCO", held at Mysore, organized by the Ministry of Education, Government of India, and a lecture on "Ancient South India and her Culture Contacts" delivered at the Annamalai University, Chidambaram, South India in October 1950.

Dr. Ehrenfels took part in and suggested methods of research to the Conference on Social Tension held under the auspices of the Dept. of Psychology, University of Madras in 1950-51, and drafted questionnaires in co-operation with Dr. G. D. Boaz and Dr. Kuppuswami, and contributed a series of special lectures on Anthropological subjects to "The School of Wisdom" at the Theosophical Society, Adyar, Madras in 1950.

Another series of lectures on Anthropology were delivered by him at the Osmania College, Vaniyambadi, The Geography Association of the Madras Presidency College and the Madras Government Arts College History Association in 1950.

Dr. Ehrenfels delivered each one lecture on "Psychology and Anthropology" in March 1951 at the Women's Christian College, Madras, on "Patterns of Harmony in different cultures" at the Madras University Psychological Society in July 1951, "The Dravidian Past" in July 1953 at the Indian Institute of Culture, Bangalore and "Megalithism in South India and the Dravidian Question" at the Archaeological Society of South India, in October 1953.

Dr. Ehrenfels participated in discussions and read a paper as Consultant and Raporteur at the UNESCO Seminar on "The Status of Women in South East Asia", held at New Delhi in January 1953. (Published by the UNESCO, & Orient Longmans Ltd., 1954).

A further course of three special lectures was delivered by Dr. Ehrenfels on "Anthropology and Applied Anthropology" at Kallikote College, Berhampur, Orissa, in January 1954.

A series of lectures was delivered and subsequent discussions lead on Anthropology and Applied Anthropology at the Extension

Training Centre, Samalkota of South India, organised by the Andhra State Government Women's Welfare Department in February 1955.

Dr. Ehrenfels read a paper on "Matrilineal Civilization and the changing position of Women in India including the problems of North-South Polarization, at the Social Science Association Conference at Madras in November 1955, as its Vice-President. He also delivered special lectures on: (a) "Meaning and contents of Anthropology" and (b) "Anthropology and political Administration in a Welfare State" at the University of Mysore for its 1955-56 special lecture programme in October 1956 and attended the Mysore State Depressed Classes Seminar, arranged by the Government of Mysore at Kengeri and read a paper on: "Problems of Acculturation" in February 1956 and also served as a Steering Committee Member of the UNESCO Seminar on Traditional Cultures under the auspices of the University of Madras and read there a paper on "Example Setting" in February 1956.

Dr. U. R. Ehrenfels read the following research papers at the Indian Science Congress Sessions as the Delegate of the Madras University.—

Year	*Subject* —
January 1950 —	"Kadan-Semang Affinities".
January 1951 —	"Comparison of Matriliny in Assam & South India".
January 1952 —	"Khasi Kinship Terms in Four Dialects".
January 1953 —	"Preliminary Results of Comparative studies among Matrilineal Societies in India".
January 1954 —	"Differences in Marriage Regulations among Lyngngam, Khasi & Garo".
January 1956 —	"North-South Polarization".—

Part II — (B)

The Head of the Department of Anthropology has given suggestions relating to subjects of Anthropology in reply to enquiries from the Government of India, Government of Madras, Educational

Institutions and Scholars in India and abroad. Among them are the following: —

(1) Ministry of Education, Government of India
(2) Director of Public Instruction, Government of Madras;
(3) Inter-University Board of India
(4) Ministry of Labour, Government of India
(5) School of Oriental and African Studies, Department of Cultural Anthropology, University of London, W. C. I
(6) Viking Fund, Wenner-Gren Foundation for Anthropological Research, New York, U. S. A.
(7) Government of India Public Service Commission
* (8) Department of Anthropology, Lucknow University
* (9) Department of Geography, Calcutta University
(10) Research Programmes Committee of the Planning Commission, Government of India
(11) Backward Classes Commission, Government of India
(12) The Ford Foundation, New Delhi, India

The Government of India, Backward Classes Commission Questionnaires dated 15th July 1953, at the request of the Joint Secretary of the Government of India, Backward Classes Commission, Dr. U. R. Ehrenfels has in January 1954 submitted brief answers and schemes for the Backward Classes of India and at the request of the Government of India, Research Programmes Committee of the Planning Commission in February 1955, he has submitted a scheme for Social Welfare programmes under the following topics: —

1. Inter-group relationships in rural areas (This would include inter-caste relations, untouchability etc.)
2. Scheduled Castes-assessment of problems and welfare programmes.
3. Scheduled Tribes-study of problems and programmes.

(* (8) This information was submitted by Dr. Ehrenfels to Dr. D. N. Majumdar, Lucknow University and will be published in "A Handbook of World Resources for Research and Education in Anthropology")

(* (9) cf: "Report on the Current Research Projects in Indian Anthropology"—by Dr. N. K. Bose, in "*Man in India*", Vol. 32, No. 3, July-September 1952).

4. The beggar problem.
5. Measures relating to prostitution and immoral traffic.

After consultation with Lt.-Col. Dr. Sir A. Lakshmanaswami Mudaliar, Vice-Chancellor of our University, Dr. U. R. Ehrenfels has also submitted in September 1955 to Dr. Ensminger, The Ford Foundation, New Delhi, an outline of teaching and research-work which he was planning to carry out in the Department of Anthropology, if and when fund will be available.

Part II — (C)

ANTHROPOLOGICAL SOCIETY — MADRAS

With the permission of the University authorities Dr. U. R. Ehrenfels started the Anthropological Association in 1950. Sri Mahmodd Sheriff, then Diploma student, was its first Secretary. Dr. Ehrenfels here records his gratefulness to the Vice-Chancellor, Lt.-Col. Dr. Sir. A. Lakshmanaswami Mudaliar, for his help in the matter and to the office-bearers and students, — especially the first secretary—for their co-operation.

Sri S. Govindarajulu Naidu inaugurated the Society in 1950, when he was Acting Vice-Chancellor of this University. The aims of the Society are: — (1) to encourage research in Anthropology (2) To popularise Anthropological knowledge (3) To organize seminary discussions and (4) To establish a well-equipped Anthropological centre for systematic anthropological research in South India.

The Anthropological Society-Madras was conducting meetings and seminary discussions under the auspices of the Department of Anthropology of this University. Visiting scholars were invited to speak and read papers on Anthropology and related subjects.

Part III.

Research work carried out by Dr. U. R. Ehrenfels as the Head of the Department of Anthropology, up-to-date comprises the following items: —

1949

Cultural history of matrilineal civilizations of South India and their relations to other matrilineal groups in India: Preparations

have been made for field-researches among the Khasis of Assam in this connection. A Grant for these field-researches has been received by him from the "Viking-Fund", — later "Wenner-Gren Foundation for Anthropological Research", Inc., N. Y., U. S. A.

Research work on Physical Anthropology: Preparation for an experimental study of the hypertension and flexibility of the human hand has been made in co-operation with Professor A. A. Ayyar, Director, Dept. of Anatomy, Stanley Medical College, Madras.

Research work on South Indian Cultural History: A series of twelve articles on various aspects of South Indian Cultural History was published in "The Hindu", Madras in 1949-50.

1950

Field-trip to Khasi land during December-January 1949-1950 and April to June 1950, with the financial aid from the "Viking Fund", Inc., New York. A collection of ethnographic material was brought back for the Department along with its scientific description. Also one field trip to Wynad (N. Malabar) was carried out with Students of the Certificate and Diploma classes.

1951

A field trip to the Virpath Malayalar, in North Malabar was undertaken with Sri K. K. Pratapan, then Diploma student, to carry research among a matrilineal community of shifting cultivators.

Completion of the manuscripts on field-work on the Kadar of Cochin—which had been carried out during previous years.

1952

Field research among Khasi and Garo, the two principal matrilineal communities of Central Assam, from December 1951 to January 1952 and again during April-May 1952, when Dr. Ehrenfels established first contacts with the likewise matrilineal Lyngngam in Nongstoin State on the Khasi and Garo-Hill border.

Dr. Ehrenfels took up the questions, connected with the problem of the Dravidian homeland and origins, which were discussed at the International Anthropology Congress at Vienna, in September 1952 and to which also parts of his previously undertaken comparative studies in matrilineal civilizations of India referred.

1953

Field researches during the first half of the year, among the Lyngngam, a matrilineal group of shifting cultivators in the Khasi State Nongstoin, on the Garo Hill border. Dr. Ehrenfels visited in this connection Nongstoin and Shillong twice, and Gantok (Sikkim State), once during this period. He also further pursued the questions, connected with the problems of the Dravidian homeland and origins, from the point of view of his own original researches and delivered on this problem two lectures at the invitation of the Indian Institute of Culture, Bangalore, July 1953.

1954

Dr. U. R. Ehrenfels studied and took part (during this year when he was at Europe on leave) in Social Sciences; and Philosophy discussions at the Austrian College, Alpbach (Tyrol) and gave a lecture on his researches in the changing position of women to the Austrian Branch of "Women's International League for Freedom and Peace", Geneva.

1955

Researches in the changing position of women in India and the disintegration and re-integration, particularly among Highlanders of India affected by the acculturation process, were carried out by Dr. Ehrenfels who also contributed a paper on this subject to the "Third Tribal Welfare Conference", held at Jagdalpur in March 1955. He continued his comparative study of matrilineal societies in India and in this connection undertook research in the nature and origins of North-South Polarization as a phenomenon of culture-history, social and religious ritualistic organization.

1956

He also studied new developments of Social and Cultural Anthropology at the Institute of the Vienna University (during the year when he was at Europe on leave) and contributed to its Jubilee publication.

Part III — (A)

1. List of Research publications by Dr. U. R. Ehrenfels, Ph.D. (Vienna) Head of the Department of Anthropology, University of Madras, from 1949. The University of Madras has started the Anthropological Series in 1952 and published a book by Dr. U. R. Ehrenfels — *Kadar of Cochin* —

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List of Anthropology Papers and Books

Archaeology and Social Anthropology in South India. (A series of 7-articles.) — *"The Hindu"*, Madras, 1949.

Aboriginal Womanhood and Culture Contact. — *"Eastern Anthropologist, Lucknow*, 1949.

Biographical Records, etc., — *Madras University Journal*, 1949.

The Polarisation of Society, — *"Aryan Path"*, Bombay, 1949.

Khasi-South India (A Series of 5-articles, illustrated), — *"The Hindu"*, Madras, 1950.

Rich and Poor in Indian Womanhood, — *"Women's Welfare Journal"*, Govt. of Madras, 1950.

Position of Womanhood in Islam, — *Islamic Review*, England, 1950.

A Kadan Creation Myth, — *"Anthropos"*, Switzerland, 1950.

Bilateral Organization etc., — *Anthropological Society Journal,* Bombay, 1950.

Assam and Kerala (Radio Talk), — *"Indian Listener", Delhi issue,* Aug. 1950.

Prevention of Cruelty to Babies. — *Women's Welfare Journal,* Government of Madras, 1950.

The Double Sex Character of the Khasi Great Deity (*illustr*). — *"Madras University Journal"*, 1950.

South Asian Style, — *"United Asia", Indian Number,* Bombay 1950.

Two Forms of Religious Toleration, — *"Islamic Literature"*, Karachi, 1951.

Ambivalent Attitudes to Womanhood in Islamic Society, — *Islamic Culture,* Hyderabad-Dn., 1951.

Tribes of Madras State, in Government of Madras, — *Ministry of Information and Broadcasting* — *Republic Special Number* Madras, 1951.

Kadars of Cochin, — *Tribes of India,* pt. 2., Bharatiya Adimjati Sevak Sangh, Kingsway, Delhi, 1951.

Women's Work — *"Women's Welfare Journal"*, Govt. of Madras 1951.

Kadar of Cochin (*Illustrated Book*), *Anthropological Series No. 1,* University of Madras, 1952.

Ancient South India and Her Culture Contacts. — *Annamalai University Journal,* Chidambaram, S. India, 1952.

The Mother-Goddess (in collaboration with Mr. M. S. Gopalakrishnan), *"Triveni"*, Masulipatam, 1952.

Matrilineal Civilizations in India (a series of four articles) — *"The Hindu"*, Madras, 1953.

The Kadar, The Khasis, Indian Anthropology, — in the 3rd Volume of the *Tamil Encyclopaedia,* Madras.

Is War A general Trait of Human Nature? — *"The Indian Year Book of International Affairs"*, Madras, 1952.

Social Ethics in The Anthropological Age, — *Women's Welfare Journal* , (Annual Number), Govt. of Madras, 1953.

The Comparative Study of Matrilineal Civilizations in India, — *"Gauhati University Journal — Kakkati Memorial Number"*, Assam, 1953.

Lyngngam of Assam, — *The March of India* , Ministry of Information, Government of India, Delhi, 1953.

Khasis Kinship Terms in Four Dialects, — *"Anthropos"*, Switzerland, 1953.

The Status of Women in South Asia, — *UNESCO and Asian Relations Organization Joint Publication,* N. Delhi, 1954.

Mutter-rechi in Vorderindien, "Das Lexikon Der Frau", (Encyclios) Zurich — 1954.

Zwei Pole der Gesellschaft, "Kontinente", Vienna, Austria, 1955.

Hygiene and Acculturation, "Report of the 3rd Tribal Welfare Conference, held at Jagadalpur, March 1955 and also published in *Madras University Journal,* July 1956.

Three Matrilineal Groups in Assam — A study of Differences and Similarities — *"American Anthropologist"*, Chicago, U. S. A., 1955.

The Culturological Approach to Non-Alignment — *"The Indian Book of International Affairs"*, Madras, 1955.

Twentieth Century Trends in Anthropological Thought, — *"Madras University Journal"*, 1956.

Matriliny in Malabar, — *"Mysindia"*, Bangalore, 1956.

North-South Polarization, — *"Mysindia"*, Bangalore, 1956.

The Disinheritance of Women, — *"The Mail"*, Madras, August 1956.

Islam between West and East. — *"Islamic Literature"*, Lahore, 1956.

The Rise of Womenhood, — *"Mankind"*, Hyderabad-Dn., 1956 (To be continued).

2. *Development of the Department of Anthropology.* —

(i) A small collection containing 300-books only belongs to the Department and subscribing regularly 10 to 15 journals on Anthropology.

(ii) *Anthropological Museum* — Castes and Models, Skeleton, Archaeological Oranaments, Neoliths and Palaeoliths of Madras Presidency, etc., The collection of Ethnographical material of Khasi Home Industry, — collections along with scientific descriptions and photos of the Travancore Tribes.

(iii) *Anthropological Equipment* — One set anthropometric equipment for measuring purposes of the human body, skull, etc.

3. *Introducing Anthropology in the B.A., and B.Sc., Degree courses* —

As per the previous proposals of Dr. U. R. Ehrenfels, Head of the Department of Anthropology, University of Madras and the recommendations of the Board of studies in Anthropology, for the first time the Madras University has introduced Anthropology as Main and Ancillary subjects in the B. A., and B. Sc., Degree courses of this University.

4. *Additional appointment to the Department.* —

Apart from the expansion, development, usual activities and the progress of the department of Anthropology, one Ty. Junior Lecturer has also been appointed on 15th July 1955.

Ty. Junior Lecturer:

Sri M. S. Gopalakrishnan, M.A., M.Litt., Dip. in Anth., has been appointed as a Ty. Junior Lecturer of the department for one year from 15th July 1955 and his service has been extended for further period of one more year from 15th July 1956.

The Junior lecturer also holds the subsidiary Certificate and Diploma Classes in Anthropology.

The following research papers were written and published by him from 15th July 1955.

1. Read a paper on "Preliminary studies relating to Nambudri Brahmins of Kerala and Culture Change — at the All India Conference of Anthropologists and Sociologists, arranged by Madras Social Science Association, 1955.
2. Submitted a paper on "The Grove, the Serpent and the Goddess in Kerala Culture — to the Psychological Society Conference held at Madras in Dec. 1955.

3. Realizing Facts — Self Realization through Anthropology,- *Madras University Journal,* January 1956.
4. Witchcraft, Folk-Lore, Tattooing, — *Tamil Encyclopaedia,* Madras, (in the press).
5. An Analysis of Two units of Observation in the Religio — Social life of Kerala — *Madras University Journal,* (in the press).

Fulbright Scholar from the University of California.

Mr. Richard Bachenheimer, Fulbright Scholar from the University of California joined the department on 4-8-1953 as a Casual student and was engaged in a village study at Mysore.

6. The following statement gives information regarding the Certificate and Diploma Courses in Anthropology, Stipendary, Non-Stipendiary, Government of India Research Studentships of the Department of Anthropology. Table VI gives information on higher degree awarded by this University for the thesis, which was submitted through the Department of Anthropology, University of Madras.

TABLE I

Showing the number of candidates who joined the Department of Anthropology, University of Madras, for the Certificate and Diploma Courses in Anthropology from 1947.

Year	Certificate and 1st year Diploma Course in Anthropology (Total).	Second year Diploma Course in Anthropology (Total).
1947-1948	.. 5	—
1948-1949	.. 6	4
1949-1950	.. 5	4
1950-1951	.. 5	4
1951-1952	.. 5	2
1952-1953	.. 6	4
1953-1954	.. 11	4
1954-1955	.. 4	7
1955-1956	.. 7	2
1956-1957	.. 9	7

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TABLE II

Showing the number of candidates registered, examined and passed the Certificate and Diploma Course in Anthropology from 1948

Year		Registered for certificate.	Registered for diploma.	Appeared & examined in certificate.	Appeared & examined in diploma.	(General Total) passed in certificate.	(General Total) passed in diploma.
1948	..	4	—	4	—	4	–
1949	..	2	4	2	3	2	3
1950	..	4	4	4	3	4	3
1951	..	3	4	3	4	3	4
1952	..	5	2	4	2	3	2
1953	..	2	4	2	3	1	3
1954	..	2	3	2	3	1	3
1955	..	2	6	1	6	1	6
1956	..	3	2	3	2	3	2

TABLE III

Showing the number of candidates worked as Madras University Stipendiary Research Scholar of the Department of Anthropology.

Year.		No.	Subject.
From September 1950 to August 1952	..	1	"Mother-Goddess worship — A Regional Study of Madras and Malabar".

TABLE IV

Showing the number of candidates worked and working as Madras University Non-Stipendiary Research Scholar of the Department of Anthropology

Year.		Nos.	Subjects.
1952.	..	1	"Primitive Medicine with particular reference to Siddha System".
Began from January 1956.	..	1	"Change in occupation and Status of Women in Madras".
From August, 1956.	..	1	"Changes in the Social and Cultural Anthropology of the Matrilineal Hindu of Kerala".

TABLE V

Showing the number of candidates working in the Department of Anthropology, University of Madras as a Government of India Senior Research Scholar. The Government of India in 1956 has for the first time awarded one Senior Research Scholarship to this Dept., for three years, under the Government of India Research Training Scholarships Scheme.

Year.	No.	Subject.
From 17th January, 1956. ..	1	"Finger and Palmer prints of South Indian Tribes".

TABLE VI

Showing the number of Madras University Anthropology Department candidates qualified for the M. Litt., Degree.

Year.	Name.	Subject of the thesis.	Degree awarded.
1954.	Mr. M. S. Gopalakrishnan.	"Mother-Goddess Worship—A Regional Study of Madras and Malabar".	M.Litt.

7. Research work is at present carried on in the following problems :—

(1) The changing position of women in Oriental societies. Two research projects are pursued in the Department under the supervision of the Head of the Department.

(a) "Changes in the occupation and status of women in Madras", viewed from the point of view of their family background—matrilineal or patrilineal.

(b) "Change in the Social and Cultural Anthropology of matrilineal Hindus of Kerala"—with particular reference to the Hindu Succession Act.

(2) Study of matrilineal Muslim societies on the coast of Kerala and

(3) Study of shifting cultivating groups and their possible culture affinities with Adi Dravidas, Adi Karnatakas and kindred groups. This problem is also being considered from the viewpoint of Physical Anthropology as a part aspect of a research project on "Finger and Palmer Prints of South Indian Tribes".

Work on a book treating the subjects of Social and Cultural Anthropology, with special reference to India, in an introductory manner, has been started.

8. Conclusion :—Dr. U. R. Ehrenfels, Ph.D. (Vienna), Head of the Department of Anthropology, University of Madras, records his appreciation of good work done for the Department of Anthropology, University of Madras, by the staff, Sri S. N. Vittal Rao from 1951 and N. Devarajan from 1945, since the Department was inaugurated.

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IX

DEPARTMENT OF INTERNATIONAL AND CONSTITUTIONAL LAW

The Department was founded in August 1951 and has now completed its first quinquennium. Its main tasks have been to give instruction to students studying for the M.L. Degree in International and Constitutional Law. In the last five years six students have obtained the M.L. Degree.

The Department was also engaged in research in two main fields (1) Law of Nations in Asia and (2) Comparative Constitutional Law in South East Asia. Research has been carried out by the Professor of International and Constitutional Law with the support of a team of Research Fellows and students. The main papers produced as a result of the above research are shown in the attached list.

The Department helped also to organise an Indian Study Group of International Affairs which publishes the Indian Year Book of International Affairs. Four volumes of the Year Book have already appeared and the fifth volume will be brought out at the end of 1956. I am attaching a few prospectuses of the year-book showing the articles published in the last four volumes.

The Department also cooperates with the International Association of Legal Science. To organise this cooperation, the Indian Committee of Compartive Law was founded with the Professor as its Secretary General. The Committee made a valuable contribution to the World Conference of Compartive Law held in Barcelona in September 1956. Particularly, the Committee prepared all material for the colloquium on the Reception of English Law in India in the framework of the Conference.

List of Publications

PROF. C. H. ALEXANDROWICZ

1. The Supreme Court of India as a Habeus Corpus Bench.
2. Foreign Exchange Regulations in Asia and in the Far East.
3. International Law in India.
4. American Influence in Indian Constitution-making.
5. Chinese suzerainty over Tibet.

6. The quasi-judicial function in recognition of States and Governments.
7. The legal position of Tibet.
8. Tibet and India.
9. The Kashmir deadlock.
10. The Legal aspect of the Kashmir problem.
11. Is India a Federation?
12. Jus Gentium in Asia.
13. Grotius on India.
14. Moghul sovereignty and the Law of Nations.
15. The Continuity of the Sovereign status of China.
16. Vertical and horizontal divisions of International Society.
17. Common Law Prerogative writs in India.
18. Constitutional Developments in India (to be published by Oxford University Press).

MR. M. K. NAWAZ—(Research Fellow)

1 Legal aspect of Anglo-Moghul Relations.
2. Relations between the East India Company and Burma in the 17th century.
3. The Kashmir problem.
4. The Constitution of Ceylon.

MR. T. S. RAMARAO (Research Student)

1. India and the United Nations.
2. The Tokyo Trial (Dissenting Judgment).
3. Private International Law in India.

MR. K. NARAYANARAO

1. The legal aspect of the Goan problem.
2. The Constitution of the Philippines.

MR. N. A. SUBRAMANIAM

1. The Supreme Court of India.
2. The Constitution of Burma in the light of judicial decisions.

MISS LILLY THOMAS

1. The Political status of women (a Comparative legal study).

SRI A. K. SRINIVASAMURTI

1. The Constitutions of the Colombo Powers.
2. A Nehru doctrine for Asia.

Printed and Published by G. Srinivasachari, B.A., at the G. S. Press, 21, Narasingapuram Street, Mount Road, Madras.